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Address.

SOME REMARKS ON THE PRESENT STATUS OF MEDICAL EDUCATION IN THE UNITED STATES.*

VICTOR C. VAUGHAN, M.D., LL.D.
ANN ARBOR, MICH.

Gentlemen of the Association: In the first place, I desire to say that I greatly appreciate the honor that you conferred on me last year in electing me president of this body. When we compare medical education in our best schools in this country to-day with that of twenty or thirty years ago we feel that we have just cause of self-congratulation. Many of us here to-day went through the course of medicine in two years of six months each, and even then many of the lectures and demonstrations given the first year were repeated in the second. Many of us had but little, and possibly some of us no laboratory instruction other than that of the dissecting room. Now, all the colleges in this association give courses which extend through four years, none of which are less than six months in duration. The majority of these schools have graded courses, thus doing away with all repetition of lectures and demonstrations. The laboratory method has been applied to every branch of medical teaching, and the old theatrical clinic has largely been supplanted by bedside instruction. It is probably true that in no other department of learning has education advanced so rapidly as in medicine. All of this, I say, is a matter on which we as medical teachers may congratulate ourselves, and with some justness claim that we are giving to our students much more and much better instruction than our teachers gave us.

The object of my talk to-day is not to dwell on what has been accomplished in the recent past, but rather to emphasize some of the demands which the present and the future impose on us. We must not satisfy ourselves with the thought that we are doing better work than our predecessors in medical education did, but we must seriously ask ourselves whether or not we are to-day doing all that we should do. If my remarks should appear to some as too critical, please permit me to assure you that I have the welfare of the profession at heart, and that I am not desirous of doing an injustice to anyone, nor, indeed, do I desire to criticise any individual or any school. However, we are not likely to move forward and make improvements unless we become aware of our defects. A certain amount of self-esteem and pride is desirable, but when this article is stored up in quantity sufficient to lead one to believe that he has reached perfection, we can be sure that decay is rapidly advancing. With these preliminary remarks, I am going to say a few plain words with the best of intentions.

Within the past few years much has been said concerning the commercial spirit which has apparently invaded our profession to some extent. Numerous articles have appeared in our journals bearing on this subject, and it has been discussed in nearly every possible phase. The form of commercialism which has attracted most attention is the question of the division of fees between the attending physician and the consultant. This practice has been generally condemned, and it seems to me that the condemnation has been only just. Other forms in which commercialism manifests itself have been the exorbitant fees charged by a few specialists on account of which many people in moderate circumstances have been driven to free dispensaries and free clinics; and, on the other hand, cutting of fees and the doing of professional work, as it were, in job lots, for various organizations. It is needless for me to enumerate all the evidence that might be brought forward in order to show that our profession has not wholly escaped the spirit of commercialism which has so great a hold on the people of this country, and possibly other countries as well, at present.

I will ask the question whether or not our medical schools have been altogether free from commercialism. The individual practitioner places himself outside of the Code of Ethics if he advertises himself; and still if he be a member of a medical faculty he may indirectly do a great deal of self-advertising and still regard his actions as perfectly legitimate. As a rule, the better medical schools do not resort to advertising to any great extent, and as a general proposition it is true that the real value of a school is in inverse ratio to the extent to which it advertises. Dr. John Smith, as a private practitioner of medicine, would under no circumstances go to his brother practitioner's patient and laud his own ability and tell how superior his own attainments are compared with those of the physician in attendance; and yet Dr. John Smith, as secretary or dean of a medical school, does not hesitate to send circulars to students attending other medical schools, telling them of the superior advantages offered by his own institution. The same Dr. John Smith, reputable physician as he is, would hardly send a postal card to a friend in a neighboring town and ask that friend to return the postal card with the names of two sick persons, or to otherwise put him in communication with those sick in order that he might become their physician; and yet Dr. Smith, as secretary or dean of a medical college, sends out such postal cards by the hundreds. I have not known of any premium being offered for the

* Presidential Address before the Association of American Medical Colleges, 1902.

largest number of prospective medical students about whom information could be given, but this is only one step in advance of what is being done, not by the poorest medical schools in the United States, but by some that claim a position among the best. Can it be a matter of surprise that the graduates of these schools enter the medical profession fairly well imbued with the idea that business success is the chief aim of the profession?

Turning next to the requirements for admission to our medical schools, let me ask if we live up to the requirements which we advertise; and in the second place, are our advertised requirements as high as they should be? On the first of these points I want to say that no one can conduct a fairly large correspondence with prospective medical students without becoming aware of the fact that some of our schools do not live up to their advertised requirements for admission. For this sin on the part of certain schools there is absolutely no justification. There is at present no crying need for more medical men in this country, and certainly not for more poorly educated medical men. As to the second point, I am well aware of the fact that all medical schools can not advance the requirements for admission with the same rapidity. Harvard, with her five-million-dollar endowment, can well afford to cut the number of her students very materially, and this she has had the courage to do, but probably there is no other medical school in the country which could afford to make so radical a change in so short a time. But notwithstanding these facts, it seems to me that it is about time that this Association of American Medical Colleges should be making some advance in the requirements for admission. With the profession overcrowded as it is, with already too many ignorant men in its ranks, the demand for more must be small unless the recruits be selected with the best of care.

There are two ways of teaching medicine. These two methods require different material to start with and their finished products are radically different. Medical knowledge may be defined as embracing all information which can be utilized in the prevention or cure of disease. Physics, chemistry, anatomy, physiology, bacteriology and pathology are some of the sciences, the facts of which are utilized in medicine. Now, one way of teaching medicine consists in taking the isolated facts which can be utilized in the prevention or cure of disease from each of these sciences and teaching these to the student by rote, without ever attempting to give him any real knowledge of the sciences on which medicine is founded. A man may be taught how to fit glasses without ever having any scientific knowledge of the refraction of light or of the construction of lenses. A student can memorize maximum and minimum doses of the alkaloids without ever having any knowledge of the chemical nature of these vegetable products, and without any knowledge of the botanical classification of the plants from which they come. A man may be taught to stain tubercle bacilli, possibly to recognize diphtheria bacteriologically, and even to utilize the Widal test without knowing anything scientifically about bacteriology. A man with knowledge thus acquired and thus limited may pass a fairly creditable examination, but he is not a man who knows anything of real value concerning the sciences on which medicine is founded, and inasmuch as medicine is progressive, such a man is sure to fall behind within a few years at most, and become not an honor, but a disgrace to his profession. He is one who has built on the sands, and the house thus constructed must surely fall. There is too much of this kind of medical teaching in our country to-day. On the other hand, chemistry, biology, physics, anatomy, bacteriology, physiology and pathology should be taught to medical students as independent sciences, and no one should be allowed to enter the medical profession unless he has a fairly comprehensive grasp of each one of these subjects, and his knowledge must not be confined to those isolated facts which at present are utilizable in medicine. Then, when advances come, when changes are made, when new discoveries open up new fields, this man is able to keep abreast of the times. He has the scientific comprehension necessary in order for him to become an intelligent student of progressive medicine.

These statements will undoubtedly be met by the assertion that no one man can hope to make himself a master of any one of these sciences, and much less can he hope to make himself thoroughly familiar with all of them. While this is true, I claim that the medical student should be made perfectly familiar with the fundamental principles of all the sciences that directly contribute to medical knowledge. A man having this knowledge is not likely to cease to be a student, nor is he likely to be imposed on by advertising drug firms, which not only present him with unlimited samples, but have the audacity to tell him all about their therapeutical uses. For instance, the medical man who has been well grounded in the science of physiological chemistry is not likely to prescribe wine of pepsin or other alcoholic preparations of digestive ferments. Neither is he likely to be misled by any of the numerous newly coined words, which mean much or little, according to the way in which they are used. It seems to me that the only sure way in which the requirements for admission to our medical schools can be rigidly controlled and honestly adhered to is by the establishment of boards, no member of which has any connection with the medical school, which shall pass on all prospective medical matriculates. I am aware of the fact that this method is not wholly free from criticism. Such boards when composed of non-medical men do not always wisely discriminate between those subjects which best fit a man for the study of medicine, and those which, whatever their value may be in securing a broad education, are relatively of little importance in preparing one for medical studies.

It seems to me that there can be no question as to the desirability of every medical student having the ability to read either French or German, and if he can read both, his fitness for medical studies is greatly enhanced. It can not be denied that at present, at least, the most important contributions made to medical science come to us from German sources, and the man who must rely on translations in order to secure this information is, in the first place, delayed in acquiring the knowledge, and in the second place he is likely to be misled by errors in the translation. Did time permit I could point out numerous instances in which important articles in French and German have been misconstrued by the translator. There are two important sources of error in such translations. One of them lies in an imperfect acquaintance with the foreign language, and the other is due to the fact that these translations are often made by individuals who are ignorant of the subject matter involved in the contribution. Of the two languages, French and German, it is undoubtedly true that the latter is to the medical man the more important, and if knowledge of only one be demanded, German should be selected. The time may come, and I am

inclined to think that it will come, when our own country will be quite abreast of Germany in scientific work, but such a time has not yet arrived, and the man who attempts to keep up with the times in a medical way without knowledge of the German language is, to say the least, heavily handicapped.

I suppose that no one will question the assertion that a fairly good grounding in the general sciences of biology is quite essential to the successful study of medicine. The preliminary work in this subject should cover a rather extensive course of reading and should always include a good drill in laboratory methods. In my opinion there is no subject so much neglected as a preparation for medicine as the study of physics and physical chemistry. A knowledge of physics is needed in the application of all mechanical means for the correction of deformities, for the treatment of fractures and dislocations, for the study of errors of refraction, and in the use of the microscope, ophthalmoscope, laryngoscope, *x*-ray apparatus, etc., and yet only a few of our medical schools demand any satisfactory preliminary knowledge of physics for admission, and still fewer of them offer the student any advanced work in this branch while pursuing his medical studies. In France and Germany the importance of physics to the medical student is thoroughly appreciated. A conversation which I had a few years ago with a clinical teacher in the University of Paris greatly interested me in this matter. He remarked that he could not understand how the best medical schools in this country could afford to neglect the teaching of physics, and added that his own faculty found it necessary not only to require an elementary knowledge of this subject for admission, but to furnish their students with advanced instruction in this branch while taking their medical course. In the German universities medical students take the same work pursued by their scientific colleagues in physics.

Physical chemistry is becoming of more and more importance, both in the study of physiology and pharmacology. It is true that the importance of this subject has been but recently recognized, and we must allow for a certain length of time necessary for medical schools to appreciate this new information and to provide means for giving instruction in accordance therewith to their students. The instruction in chemistry given to-day in many of our best medical schools is scarcely better than a farce. It embraces a semester's—possibly two semesters'—lectures with demonstrations covering the whole range of general, analytical, physiological, pathological and toxicological chemistry, supplemented by a brief course in the analytical laboratory. How can we expect the student whose knowledge of chemistry is limited to that acquired in such a course of instruction to comprehend the significance of Ehrlich's side-chain theory, or really to have any just comprehension of the nature of food principles, to say nothing of their assimilation and utilization by the cells of the body. A knowledge of the fundamental facts of general chemistry should be required of every applicant for admission to a medical school, and either before admission or after matriculation each student should be thoroughly grounded in the theories of organic chemistry and the general principles of physiologic chemistry, and to a certain extent in the methods of toxicologic investigation. I am aware of the fact that to do all of these things means to greatly increase the work which must be done by the medical student, and it is true already that there is no other profession proper preparation for which demands more time, energy and devotion and costs more money; but we must remember, as I have already stated, that there is no crying demand for more doctors, and we, the medical educators of this country, should have enough professional spirit to see that unworthy men do not enter our ranks. We must not mistake bigness for greatness, and we should have more pride in the quality than in the quantity of our products.

Shall we rely on our public schools to fit young men for the study of medicine? The public school system of most of the states in the union is probably better managed and is more creditable to us as a nation than any other state function. In the majority of the northern states, at least, this system was modeled during the early part of the nineteenth century after what was then known as the Prussian system. It embraces eight years of primary work, given for the most part by underpaid but well-qualified and conscientious women. From the primary grade the child enters the high school, in which he spends four years in acquiring additional knowledge. The high schools vary greatly both in the scope and the efficiency of their work. They are dependent on the wisdom and liberality of the school board, and, as a rule, they are free from the influence of political manipulators. Unfortunately this is not always true, but so far as my observation goes the high school is generally managed by fairly competent boards composed of men and women of more than average intelligence. In some few localities the political demagogue has not even spared this institution, and his corrupting influence has been felt in the selection of teachers and in the failure to provide proper equipment. It has been a part of my duty in the past fifteen years to know something in a general way of the high schools of the northwestern states. I have personally visited many of them and have frequently come in contact with teachers from a much larger number, and I have been frequently surprised at the excellence of these schools, even when situated in relatively small places and supported by relatively poor communities. As a rule, even in our larger cities the public school has better teachers, is better equipped and does better work than private schools in the same neighborhood, and a large proportion of our medical students have completed one of the two or three courses offered in one of these public schools. I take it for granted that no college belonging to this association will accept for matriculation anyone who has not had the equivalent of a high-school education, which, of course, means that the individual has had eight years in the primary and four years in the secondary schools.

Now the question arises, can we depend on these high schools to prepare young men for the study of medicine? In my opinion there are but few high schools which are sufficiently well equipped to prepare for the study of medicine, and we should demand additional instruction after graduation from the high school. In many of the high schools it still remains true that the classical course is the best offered. The teacher of Greek and Latin, who is frequently the principal of the school, is generally paid a higher salary than the teacher of the sciences, and in a general way the classical course is the best offered in our secondary schools. In our universities the classics are no longer paramount, but in the high schools the sciences have not, as a rule, received the attention they deserve. This, of course, will gradually be changed. On account of this condition of affairs I think that it will be found to be true that graduates of classical courses of our best high schools have had all the history and classics that can be reasonably expected of the man who intends to study medicine. At least they

have had all that is necessary to the successful prosecution of medical studies.

In mathematics, graduates of such schools are, as a rule, slightly deficient, for mathematics in the classical courses of most of the high schools stops with plane geometry, and I am sure that every teacher of physics will agree with me that a knowledge of plane trigonometry is essential to the successful study of physics. However, the greatest deficiency among the graduates of classical courses in the high schools lies in the modern languages and in the natural sciences. The prospects are that more attention will be given to both of these in the future, but at present the average graduate of the average classical course in the high school has had inadequate preparation in the modern languages and in the natural sciences. I mean by this that in these branches he is not, in my opinion, prepared for the study of medicine, and he should be required to pursue these subjects in some well-equipped academy, college or university before he enters the medical school.

I should like very much to see this association make some move in the direction of advancing the requirements for admission. There has been no material advance in our requirements for the past ten years, and in this day of rapid progress ten years make a long time in which to lie dormant. I am inclined to think that unless some advance is made in the near future this association will not be able to hold together. Among its members there are schools whose requirements are much in advance of those of the association. These schools have been willing to continue as members of the association, hoping that they may be able to lend a helping hand to their weaker brethren, but they are not willing to stand much longer in this position.

I have referred to the desirability of placing the question of admission to medical schools in the hands of state boards, and I desire to say a few additional words on this subject. Of course, wherever this is done there are likely to be medical schools which will require more than the state board, but so far as I can see there is no objection to this. However, it must be admitted that such boards are likely to adjust their requirements not to the best medical schools in the state, but to the poorest, and this means that the latter receive a certain official recognition which misleads medical students and may induce them to go to an inferior school rather than to one of higher grade. However, I think that so far as we have experience with this matter in the United States the establishment of a board for the examination of medical matriculates has ultimately led to advancement in the requirements. Temporarily harm may be done. I believe that it is true, but on this point I have no exact information, that the establishment of the Ohio board has led to a great decrease in the number of medical students in the medical colleges of that state, and a corresponding increase in the number of Ohio students attending inferior colleges in other states. However, the time will probably soon come when the other states will have similar laws, and this matter will adjust itself. It is barely possible that a good school may be a little slow in advancing its requirements so long as it is able to throw the responsibility for admission on the state board, but after a while the good school will get ashamed of doing this and will advance its requirements whether the state board does so or not.

In conclusion, I wish to repeat that it seems to me that this association as a body is moving slowly in the advancement of medical education. Let us be up and doing and show some evidence of growth. The standing of our profession in the next generation and its influence on the nation will depend on those who are now entering on the study of medicine under our guidance, and we, as the medical educators of this country, will be held responsible, probably above all others, for the class of men who will constitute the profession of the next generation.

Original Articles.

REQUIREMENTS FOR ADMISSION TO MEDICAL COLLEGES.*

E. A. DE SCHWEINITZ, M.D.
Dean of the Department of Medicine of the Columbian University.
WASHINGTON, D. C.

A man who has not had a biologic training may become an excellent physician, although he will have to work harder to make up deficiencies. Some of the biologic work if not possessed by the student on entrance might well be included in the first year's course. It would certainly be a great advantage if more comparative work was required throughout the regular medical course. This could often well be done by eliminating some of the special studies which are properly postgraduate. In fact, the entire medical course could be remodeled to advantage.

It is not the business of a medical school to graduate specialists, nor is it the business of a medical school to make the course of such a character that only a few can succeed in accomplishing the required work. We should give to each student a good, general, solid groundwork and afford him an opportunity to determine in his own mind the particular line to which he is best adapted.

So far as the Latin requirement for entrance is concerned, I think that in many cases the substitution of French or German might be allowed. To require these languages for entrance, however, would be unnecessary, while a certain amount of one or both of them might be demanded before graduation.

To the investigator and specialist a knowledge of these languages is invaluable. At the same time there are excellent abstracts of important foreign literature promptly issued by American journals which make the language requirement of less importance than formerly. Even if the practitioner has a knowledge of these languages, unless he is one of the fortunate few located in a large city, or near a large medical library, he has but little opportunity to profit by this knowledge without subscribing for a number of expensive journals. If he does this he will usually find that the half-page abstracts of the article contain all the information that he desires.

I do not wish to be understood as undervaluing the advantage given by a knowledge of the modern as well as the dead languages, as no one could appreciate more thoroughly how useful they are in practical work. We should point out to the student the advantage which will accrue not only from a good knowledge of French and German, but also Spanish, at the present time of great practical value. We should encourage him to round off his medical equipment by acquiring a useful knowledge and not a mere smattering, such as is often given him in many schools and colleges at the present day. We wish to make a man's training as complete and thorough as possible, and give him the basic work, after which

* Read before the Association of American Medical Colleges, 1902.

he will be able to recognize his own special abilities and select the line in which he can best succeed.

For several years we[1] have refused advanced standing to graduates in veterinary medicine, dentistry, pharmacy and literary colleges, although the constitution of the association permits such recognition. Such graduates are, as a rule, not better able to cope with the medical course in a shorter time than those who lack a college training. A high-school graduate usually makes a better student than the average college graduate. The law of New York forbids the recognition of colleges that grant advanced standing for the degrees mentioned and none should be allowed.

Certain medical studies should be allowed to count towards an A.B. degree. An A.B. degree should not be allowed to count towards a medical degree.

No college, a member of this association, should receive a student from another school unless he holds a special letter from the dean of the school from which he comes. During the past year students have come to me from other schools with clean certificates, which on inquiry proved to be falsified. Some system should be adopted which will effectually prohibit such fraudulent attempts.

REQUIREMENTS FOR ADMISSION TO MEDICAL SCHOOLS.*

JAMES RUSSELL PARSONS, JR.
SECRETARY BOARD OF REGENTS.
ALBANY, N. Y.

It will aid us in discussing this topic to review briefly the quantitative requirements now exacted:

1. In accordance with statutory provision.
2. By individual medical schools.

In the state of New York a preliminary general education equivalent to graduation from a four-year high-school course after a completed eight-year elementary course is prescribed by statute as the minimum standard for license to practice medicine. Quantitatively this standard approximates that demanded in Continental Europe. Qualitatively it leaves much to be desired. The defects are being remedied, as I shall show later.

New Hampshire, Ohio and Vermont have similar requirements, but they are not as rigidly enforced. Wisconsin demands the equivalent of admission to the junior year of an accredited high school. Delaware, Maryland, New Jersey and Pennsylvania prescribe a "common school education," Louisiana "a fair primary education," Illinois and Iowa less than one year of high-school work, Maine and Virginia evidence of a preliminary education, Arkansas a good literary education where a licensing examination is required, Rhode Island a high-school diploma or its equivalent under the same conditions. In remaining political divisions laws and rules are either silent in this respect or so indefinite as to be of little value.

According to the latest available catalogues Johns Hopkins and Harvard exact a college course for admission; Western Reserve, the completion of the junior year in college (really, as appears later, Harvard should also be in this class; admission to baccalaureate courses, however, is higher than elsewhere); the University of Minnesota, the completion of the freshman year; 17, 9, 14 and 90 medical schools require respectively four, three, two and one year of high-school work; 11 demand a grammar school education; in three the requirements are indefinite.

At present only four medical schools in the United States exact more in quantity than is represented by the New York state medical student certificate. Later, in speaking of qualitative requirements we must also include in this roll of honor Columbia, Cornell, Syracuse, University of Michigan and, after 1904, the University of California.

In answer to recent inquiries 79 of the 80 medical schools of the United States giving definite information on the subject report that the New York state medical student certificate is accepted at its face value for entrance.

There has been substantial progress since 1900, but it is still true that when medical schools conduct their own entrance examinations the tests are often mere matters of form, even though the standards appear satisfactory on paper.

The five subdivisions of this topic call for a discussion of qualitative requirements. Up to this point we have spoken entirely of quantitative requirements. I think, however, that we shall get a clearer conception of the quality of the work that should be required by approaching the subject in this way.

A satisfactory uniform statutory requirement is impracticable at present, owing to varying conditions as to density of population, educational advantages and general development. It should be comparatively easy, however, with united efforts on our part, to bring about much more satisfactory conditions than those at present prevailing.

It is highly desirable that there should be a sufficient degree of uniformity in admission requirements to medical schools so that, as in other countries, students could go without inconvenience from one school to another for special lines of work.

In graduate schools it would seem sufficient to make a minimum requirement, as at Johns Hopkins, in languages, physics, chemistry and biology. It appears that Harvard, though nominally requiring college graduation, has been in the habit of accepting master degrees, which may represent nothing, or bachelor degrees, like the Spanish Bachillerato or the French Bachelier, which stand for little in advance of high-school graduation. Then, again, the combined course as at the Lawrence Scientific School and the medical school may be completed in seven years.

Graduate schools probably without exception will continue to be parts of great university systems, where work is organized on very broad lines, thus making it possible to vary to a considerable extent the requirements for an M.D. degree.

Next in order come those schools that demand for admission to the four-year medical course one, two or three years of college work. At present there are only two schools in this class, or three including Harvard. Here there is an excellent opportunity for work in Latin, French and German, physics, chemistry, biology and mathematics, to make good deficiencies in high-school courses.

We now reach the most important class, the schools that follow the New York statutory requirements in demanding for admission a four-year high-school course based on an eight-year elementary course. I say the most important class, though it now embraces only 17 schools, because this is the highest standard that will be obtained by a large majority of those who study medicine.

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[1] Department of Medicine, the Columbian University at Washington, D. C.

* Read before the Association of American Medical Colleges, 1902.

The fact that 79 out of 80 medical schools giving us information on this matter report the acceptance of our medical student certificate at its face value, shows that in this credential we have the best common basis for work toward higher standards. The New York state medical student certificate is awarded either as a result of regents' examinations or of equivalent work in an accredited school. The acceptance of equivalents involves the careful registration of schools in all parts of the world. At present the list of registered schools, which is subject to constant revision, embraces about 9,500 institutions. Our facilities for this work are unsurpassed. In fact, no work of the kind elsewhere can be compared with it even in a remote degree for thoroughness and comprehensiveness.

The New York law fixes the statutory requirement at four years of high-school work after a completed eight-year elementary course without restriction as to subjects. It is not probable that the statute will be amended to prescribe specific subjects. Columbia, Cornell and Syracuse have done so already, however, and other New York schools will soon follow their lead. Dr. Vaughan tells us that the University of Michigan now demands specific tests which, in his judgment, can not be met, as a rule, before the completion of the sophomore year in college.

In 1900 the regents of the university, with the assistance of the medical council, suggested a preparatory medical course for adoption by New York secondary schools. In the report of the college department of the university for 1901 we compare this course with those of 12 leading universities of the United States, known to have special requirements for the fall of 1902. Following are the required subjects in the course recommended by the medical council: algebra, first year Latin, plane geometry, physical geography, Greek history, Cæsar's Commentaries, physics, Roman history, botany, first year German, chemistry, zoology and English history. All these subjects are found in the special requirements of Columbia, Cornell and Syracuse. The following subjects of the medical council's course are required or recommended in all the courses of the remaining nine universities: algebra, elementary U. S. history and civics, first year English, first year Latin, plane geometry, Greek history, Cæsar's Commentaries or second year Latin, first year German, first year French, physics, Roman history, second year German, second year French. The only subjects not recommended by the medical council that are required in any of these universities are plane trigonometry by the University of Michigan and solid geometry by Northwestern University.

It is clear to me that we should not be too specific in prescribing entrance requirements. In other words, alternatives within reasonable bounds should be permitted. Our medical student's certificate accepted at its face value generally throughout the United States, now specifies exactly the subjects represented. In this way it has been materially strengthened. There is no longer any excuse for its acceptance at more than face value. Hereafter former matriculates under exemptions can not attempt successfully to represent themselves as high-school graduates. If plane trigonometry, for example, were not included on a credential presented by an applicant for admission to the University of Michigan a special examination might be demanded in that subject. To me it would seem unnecessary to do this, provided the applicant were able to offer other subjects that might fairly be considered as an equivalent. A reading knowledge of both French and German, for example, is desirable, but I should accept Spanish, or perhaps another language for either French or German. Then, again, we should remember that it will be some years before high schools generally will be prepared to teach biology, physics and chemistry. In the meantime, most of our medical schools must accept alternatives. New York secondary schools have made very rapid progress recently in teaching these subjects. In fact, I do not hesitate to say that if botany and zoology, physics and chemistry are required in the near future for admission to New York medical schools, New York secondary schools will be able to give instruction that will meet the needs of the medical school. I believe, however, that though in other political divisions there are individual schools that do work in these subjects superior to that done by the average New York school, yet the average in New York state is higher than elsewhere, mainly because in New York state only there is a central authority that insists on a satisfactory secondary school equipment and protects the public from the imposition of bad work.

It seems to be the consensus of opinion that two years' work in Latin should be required, that algebra and plane geometry should be required in mathematics, that both physics and chemistry should be demanded and half a year each in botany and zoology. The uniformity already secured in the requirements of these 12 leading universities leads me to believe that with a reasonable use of the alternative plan we could agree on a preparatory medical course that would be acceptable generally throughout the United States by all schools admitting high-school graduates. Even more than this, schools that require one, two, three or four years of high-school work could admit on a part of this same course while working toward higher standards.

A word in closing as to admission to advanced standing. In 1902 the New York medical law was amended so that hereafter the regents may, in their discretion, accept as the equivalent of the first year of the four-year medical course evidence of graduation from a registered college course, provided that such college course shall have included not less than the minimum requirements prescribed by the regents for such admission to advanced standing. Those who favored this amendment to the medical law argued that a three-year medical course based on a satisfactory four-year college course was preferable to a four-year medical course based on high-school work only. This allowance of one year means frequently rather the shortening of the college course than of the professional course, i.e., universities maintaining medical departments are permitting seniors in the baccalaureate courses to elect the regular medical course. In January, 1899, a committee of the faculty of medicine at the University of Pennsylvania reported, after an exhaustive study: "It is evident that the trend of higher medical education and also the sentiment of the medical profession is that four full years shall be spent in a purely medical school." The dean of the faculty of medicine at Yale writes: "We believe that four years is not too much time for even a college graduate to devote to his medical course, and that three years is a sufficient time to put on his general college course."

It is believed that seven years for the combined baccalaureate and medical course represents the highest practicable standard for those students of medicine that are able to take college work, and that this fact will be generally admitted as time goes on. In 19 departments of universities both baccalaureate and medical degrees are obtained on three years in the baccalaureate course

and four years in the medical course. In 21 departments of universities the baccalaureate course is four years in length and the medical course three years in length. Forty-three independent medical schools make an allowance of one year to graduates in arts and science of reputable colleges. In 28 medical schools less than seven years are required for both baccalaureate and professional degrees. Forty-four do not give us satisfactory information on this subject.

In 19 medical schools an allowance of one year is also made to graduates in dentistry, in 70 to graduates in pharmacy, in 59 to graduates in veterinary medicine, in two to graduates in osteopathy. In 68 there is no evidence of allowance in these classes.

It is my present opinion that the regents should be somewhat elastic in registering college courses under the amended law. It should be sufficient for them to require that the college work be of such a character as will fit students for admission to advanced standing in medicine. It will be contended that only those medical schools that are wealthy enough to provide many courses from which candidates have the privilege of election within certain limits can admit to the second year of medicine without disorganizing their work students with baccalaureate degrees representing only a broad training in Latin, French and German, physics, chemistry, biology and mathematics. It may be that many schools now giving generally an allowance of one year to college graduates may be driven, like Yale and the University of Pennsylvania, to abandon this plan and to admit to the second year only such students as have covered satisfactorily the work embraced in the first medical year.

As medical school faculties are strengthened, however, and as faculties increase, they can admit to the second year of medicine more and more freely those with baccalaureate degrees that embrace a general training in Latin, French and German, physics, chemistry, biology and mathematics. In other words, I believe that at present the regents should look at it from the broad standpoint that a three-year professional course based on a four-year college course is preferable to a four-year medical course based on high-school work only, and that the responsibility for the necessary rearrangement of work must rest with the medical schools.

OBLIQUE INGUINAL HERNIA.*

A. E. BENJAMIN, M.D.
MINNEAPOLIS.

There never was a time in the history of medicine when the physician was not given an opportunity to treat hernia. A short history of the treatment of hernia may not be out of place here. It was a subject which engaged the thoughts of the first surgeons.

The attention which patients suffering with this affliction received in the early days of surgery is not flattering to the profession. We of to-day can scarcely conceive of such ignorance of surgical principles as the operators of the fifteenth century showed. The instruments used in that period for treating the affection were crude and barbarous to say the least. A study of the technic of some of the operations is certainly interesting. The evolution of the operation for hernia is a noted example of the progress of surgery along all lines.

Up to the time of the invention of the truss various plasters and irritants were used to produce an inflammation at the site of a hernia. If a slough occurred a cicatricial plug resulted, or an adhesive inflammation closed the canal. Some of these secret irritants brought good incomes to the venders. The famous Littlejohn obtained from George the First £3,000 and an annuity of £500 more for the secret.

Celsus first employed a truss. It consisted of a strap and a plate. Gordon, in 1305, suggested the spring truss, but it was not adopted until 1785, when Peter Camper rediscovered its use. Irritants were frequently introduced into the pad, which, because of the continued pressure, produced the desired effect all the sooner. This method of cure was entertained by a number of the French Academy as late as sixty years ago. Trusses are sold at the present time which are supposed to have such an irritating effect as to cause an adhesive inflammation of the sac walls.

The actual cautery and caustics were used, many persons losing their lives because of infection and slough which extended even to the bowels. The parts were frequently burned to the bone. As late as 1853 Stolz used a paste of caustic potash, nitrate of silver and gum arabic on the inner surface of the hernial sac. Quite recently Ratier treated cases by passing a seton on a needle in the sac and out through the skin at a level of the inner ring. This seton was left until suppuration occurred.

Castration for the cure and prevention of hernia was practiced, especially in France, as late as the beginning of the nineteenth century. Bishop St. Papaul stated that in his diocese alone 500 children had been castrated for the purpose of preventing hernia. The golden suture used was equal to castration. Valpeau and others scarified the ring. The testicle has been stitched into the internal ring to close the opening. Bonnet, not more than sixty years ago, practiced a needle operation. It consisted in passing a series of needles through the skin, sac and all. Pirogoff, after opening the sac, introduced a small gold-beater's skin, inflated it and tied it off. Valpeau and Jobert obtained some cures by iodin injections. Pancoast also reports several good results obtained in like manner in 1836.

Joseph H. Warren, instead of injecting an irritant inside the sac, used white oak bark external to the sac, which excited so much inflammation as to cause an adhesive inflammation of the tissue without producing a closure. Many of the quacks to-day are still adhering to this dangerous and unsatisfactory practice. In page advertisements they promise a cure without resorting to the knife.

With so many dangers and failures attending the attempts to cure hernia by sealing up the peritoneal opening from the abdomen to the scrotum, other means were tried. Dzondi was the first to suggest a plastic operation. He transplanted a section of skin into the hernial opening. Gerdy invaginated the scrotum, and with a peculiar clamp held the invaginated tissue within the inguinal canal. Later he used a needle and thread and fastened the invaginated scrotum in the canal.

Burns, Lehman, Zeis, Wattman, Gunther, Schmidt and Wützer worked along the same line, endeavoring to hold the invaginated scrotum within the canal and up to the internal ring by ivory pegs, instruments or stitches carried by peculiarly constructed needles.

Wützer constructed an instrument having a needle at its inner end which was made to pass through the fold of the integument near the internal ring. A set

* Read at the twelfth annual meeting of the Western Surgical and Gynecological Association, held at St. Joseph, Mo., December 29 and 30, 1902.

screw clamped a second plate on the fold of tissue. This instrument was modified by Redfern Davies for large hernias, making a divided invaginator.

Leroy d'Etiolles and Langenbeck maintained the original fold by pressure forceps, the latter contrived to produce an extensive slough of the anterior fold by the prolonged pressure of the forceps. The cicatricial plug resulting occasionally produced a cure.

Agnew and White invented instruments which were on the same order as that of Wützer, differing, however, in that no instrument was left to produce pressure. Thread was passed through the tissue near the internal ring, which closed the canal. Mosner used a trocar armed with a thread attached to a seton which was passed up into the canal. The seton was left for three or four weeks. Gross, Rothmund, Schlosser, Ratier, Riggs and others also adopted this plan for a time.

Credit is due Dr. John Wood, who first recognized the principle which governs the cure of this defect in Nature, by sutures or approximating the pillars of the ring with pins, as in a hare-lip operation. Prof. S. D. Gross, in 1861, in operating for a strangulated hernia, performed a similar operation with success. A description of this operation is instructive, as it shows what erroneous ideas were prevalent at that time about the union of wounds. It was thought necessary for good, firm union that a certain amount of edema and ulceration was desirable. Dr. Wood, after having operated on 200 cases, gives 50 as the per cent. of cures in adults and 75 under puberty. A truss was advised by the doctor to be worn several months after the operation.

Dr. Van Best and J. Chisolm about this time did an operation, approximating the pillars with a buried salmon gut. Dr. Greenville Donell up to 1876 had performed 96 operations with 80 cures by the subcutaneous method, using silver wire twisted over cork.

William Spanton, 1879, contrived an ingenious method of approximating the tendons and muscular boundaries of the canal. Through an incision made over the mass the index finger was introduced to shove up the sac. An instrument resembling a cork screw alternately penetrated the opposite boundaries of the canal. This brought the walls together and held them for two or three weeks until union was firm.

The direct method of S. D. Gross, who was the first to cut down on the sac, freshen the edges of the ring and suture them together with wire, was soon adopted. The sac was variously disposed of, some tying it off and removing it, others simply tied it and inverted it within the abdomen. It seems strange that the simplest, most surgical and most beneficial operation of all for the cure of hernia should remain undiscovered so long. It is a natural outcome, perhaps, of the careful study of anatomy of the hernial region, the recognition of Nature's fault in not closing this opening to the abdominal cavity, and the possibility of remedying what Nature should have in the evolution of this region.

The ultimate success of an operation is of the utmost importance to the patient. Surgeons are obliged to await the verdict of their patients before they conclude that any special operation is a success or not. The profession has had a harder time to fight popular prejudice against operation for rupture than any other surgical procedure. The public has a perfect right to this prejudice because of the evil results which have occurred in the past. Failures have been so frequent that a perfect result was not always anticipated. Therefore, physicians themselves chose to fit a truss instead of advising a radical operation. The quack advertised extensively to cure rupture without an operation. There still exists large truss-fitting establishments which are too frequently visited by the general public, who are anxious to adopt a simpler method of relief and escape the risks which they imagine are connected with a surgical operation. Nearly every drug store makes a specialty of harnessing up these afflicted persons with all sorts of appliances.

The careful and successful work of the modern surgeon, however, is beginning to bear fruit in this class of cases especially. Thoughtful, scientific men have studied the problem of hernia so that we know an operation will cure if certain principles are observed. The operation is safer for the patient than to run the chances of strangulation, notwithstanding he may wear a truss.

There are few of us who have not seen a hernia return on account of infection, or from weak union, due to sutures absorbed too rapidly. The Johns Hopkins followers have the utmost confidence in the buried silver wire. Some patients are compelled to have these sutures removed later. The disciples of Marcy tell you there is nothing so good as kangaroo tendon. This also is not to be relied on, as has been found by many who have used it. Silk and silkworm gut is not absorbed. The continual irritation may result in infection directly through the lymphatics or blood current. So-called dry, sterilized catgut is frequently absorbed before union occurs, and is not always sterile. A nidus is formed in which micro-organisms grow more readily. The silver catgut has at times given endless trouble. We may offer the same objection to chromicized catgut. The iodoform gut is the least objectionable of all; it is more sterile, lasts longer than the dry, is more elastic, and, on the whole, is a very good suture, yet failures result in its use occasionally.

The pubic region is the most difficult portion of the body to render sterile, on account of the numerous sebaceous glands and hair follicles present. Owing to this fact infection is more frequent in this region than elsewhere. When sutures are tied tightly, or there is much tension on the opposed tissue, the skin does not resist the strain, but is strangulated or cut through. This occurs likewise in the deeper tissue. If there are any infectious micro-organisms at these points a deleterious inflammation arises.

Where there are so many different ways of performing the operation and such a variety of suture material used, our conclusions are that failure or unsatisfactory results occur, otherwise we would all adopt one special method. It would seem that it is not altogether the fault of the suture material if properly sterilized as much as the manner in which it is used. An analysis of a number of cases of relapse and failure leads me to suggest the following reasons for failures:

Too vigorous and rough scrubbing of the parts before operation with the idea that it is necessary for cleanliness. This produces minute pustules of the skin just prior to the operation.

Careless preparation of the parts and the hands of the operator, or because the operator and his assistants have not worn rubber gloves.

Because operations are performed on patients suffering with some constitutional or other local disease.

The employment of sutures that are absorbed too readily.

The use of sutures that are improperly sterilized.

Lack of identification of tissue, and necessarily improper approximation of the opposing structure, e-pe-

cially in cases where there is a very poor development of the fibers of the internal oblique and transversalis.

Too great tension from vomiting or pressure of gas from within.

Incomplete dissection of the sac and its ligation.

Because sutures are tied too tightly, causing pressure, necrosis and stitch abscesses.

The use of non-absorbent sutures which, being left, irritate the structure and result in infection.

Excessive handling of the parts at the time of operation, causing destruction of tissue, necrosis, sloughing and abscess.

The causes of inguinal hernia may be few or many. The tunica vaginalis may not have contracted completely, and there remains a slight pouch at the internal ring into which the viscus may enter and gradually forces

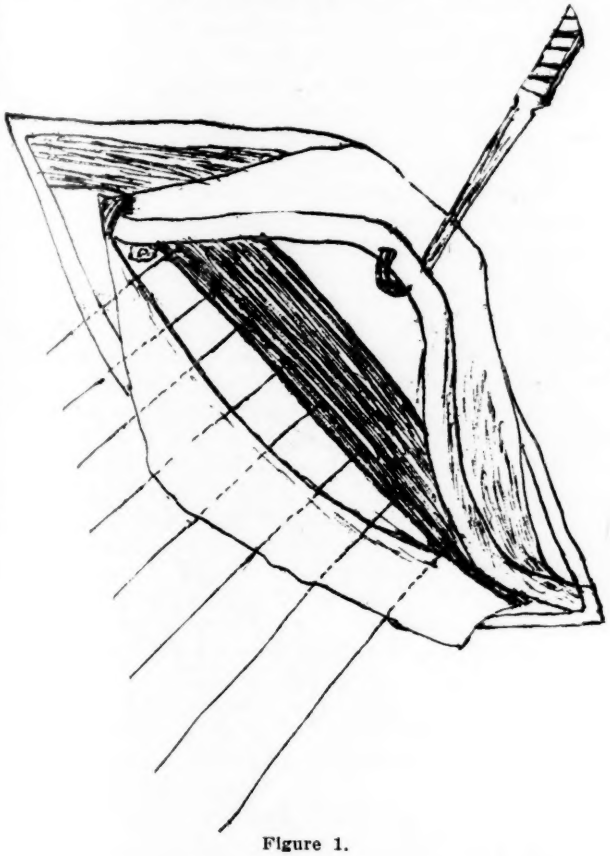

Figure 1.

its way into the canal. Increased intra-abdominal pressure from ascites or gas, straining from phimosis, constipation, stricture, prostatic hypertrophy, calculæ, coughing, etc., are exciting causes.

When the tunica vaginalis remains open, a congenital hernia is inevitable. Weak muscular or aponeurotic development around the rings or canal are potent causative factors. This is emphasized by Dr. Ferguson in an article entitled "A Typical Operation for the Cure of Oblique Inguinal Hernia." The lack of development of the original fibers of the internal oblique and transversalis, he believes, is a most important cause of hernia and relapse.

The first symptoms of a hernia develop gradually. A weakness and dull pain is felt in the groin, or sick feeling and a weight may be present, especially noticed in walking or standing, until the bowel enters the canal and can be felt, first as a bubonocele and later as a complete or scrotal hernia. A strangulated hernia occurs where the bowel is rapidly forced down through the external ring. The pillars of the ring contracting on the mass, impedes the circulation of the protruding viscus, and causes greater enlargement from congestion. Inflammation and edema of the entire mass is present, making a reduction by taxis difficult or impossible.

The treatment may be divided into palliative and the radical. The palliative consists in wearing a good-fitting truss over the internal ring. A great many good trusses are now made which enable the wearer to get around with comfort, and which permit the patient to perform almost any work required. Yet there remains the danger of strangulation that may come on because of the weakness of the support from age and wear. The history of nearly every strangulated hernia is that the patient has continually worn a truss before the accident happened.

We can not blame persons for choosing this form of treatment when they may have knowledge of friends who, having had an operation, have the hernia return and are unable to wear a truss with the comfort they did before the operation, on account of cicatricial tissue

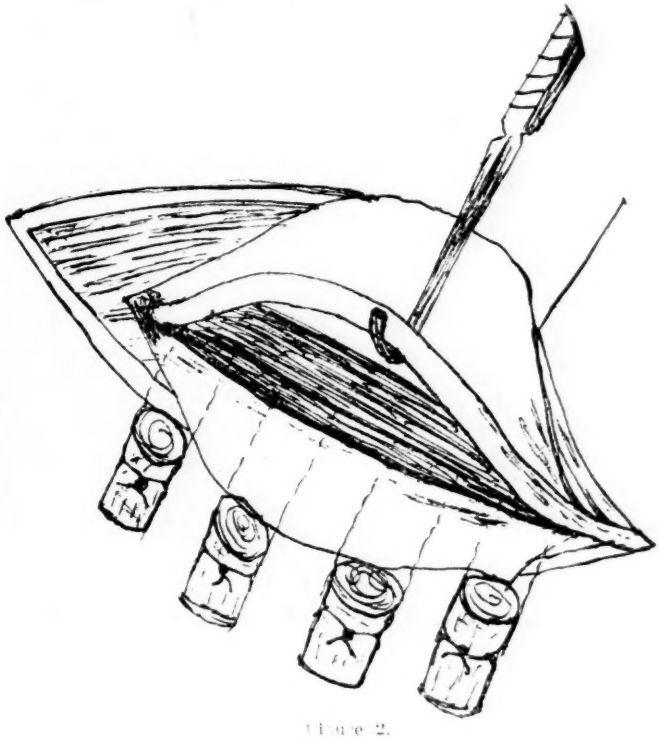

Figure 2.

formation, exaggerated because of a complicating abscess.

The modern operations which have been devised for the radical cure of hernia are numerous. All have for an object the ultimate retention of the abdominal contents, by closing the breach with as firm a wall as possible, consistent with a healthful state of the cord and testicle.

We have few criticisms to make, if any, as far as appearance of the operation at the time is concerned. It seems, however, that, generally speaking, there are too many relapses.

A suture is useful to keep the parts in apposition until union has occurred, and until that union is firm enough to resist the pressure of the internal organs.

Any substance which has to be absorbed by the tissues lessens their vitality and serves to produce a culture media, in which micro-organisms may grow. A non-absorbable suture material that can be positively sterilized by boiling has no effect on healthy tissue if prop-

erly placed and left for a few days. Any substance foreign in nature which can not be absorbed if left in the soft tissue permanently often acts as an irritant, which may cause pain or results in infection. The epidermis albus grows more rapidly where there is necrosis of the tissues, at the location of sutures.

The average surgeon is liable to tie sutures too tightly, and especially in doing an operation to cure a hernia. The idea uppermost in the mind of the operator at the time is to bring the tissue into such close proximity that no viscus can crowd through the wound while healing. This defeats the very object of the operation often by strangulating the tissue of the deeper or superficial layers. It results in pressure necrosis, a nidus for infectious germs, and consequently a deep or superficial abscess. Add to this a suture material that is absorbable, and these factors are augmented. A non-absorbable

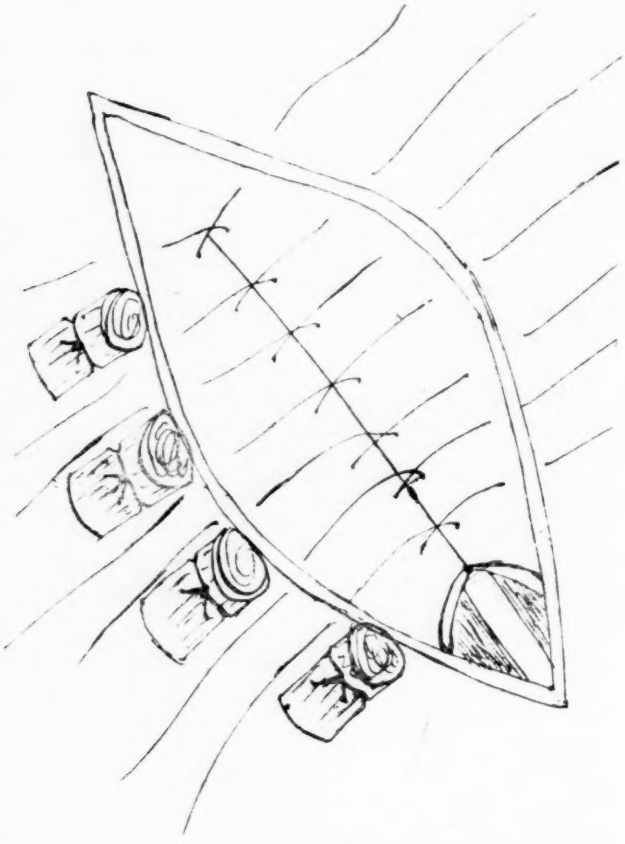

Figure 3.

buried suture prolongs the healing when there is infection, and it acts as a guide for the invading germs to other would-be unattacked tissue, through which the suture passes. The experienced operator may avoid this catastrophe because he is able more accurately to gauge the tension of his sutures.

A roll of sterilized gauze, to take off the force of too tight suturing and distribute the pressure, affords the average operator the protection and success of the more experienced surgeon. This method of operating for inguinal hernia is not new, nor do I claim that it gives better results in every instance. I do think, however, that the result is more satisfactory to the occasional operator for reasons above stated.

In preparing my patient, I prefer to shave the parts the morning of the operation. In doing so, we avoid infected areas or vesicles which may result when the shaving is done the previous evening or before the parts have been thoroughly cleansed. The time intervening between the evening and morning of the operation favors a greater multiplication of micro-organisms. The bowels are thoroughly emptied and subsequently kept free from gas accumulation. This lessens the internal pressure.

An ordinary incision for a Bassini operation is made. The aponeurosis of the external oblique is slit up to the point opposite the internal ring. The fibers of the internal oblique and transversalis muscles are divided by blunt dissection, thus opening the inguinal canal. The internal oblique and transversalis muscles are found closely connected. They are not separated, but the aponeurosis of the external oblique is carefully and thoroughly removed from the internal oblique. The lower portion is dissected down to Poupart's ligament and the transversalis separated from the peritoneum. Such careful dissection and positive identification of structures shows any deficient development and is an important help in securing direct apposition and firm union. The cord is now raised and silkworm-gut sutures are introduced to the outer side of the incision, passing through the skin, Poupart's ligament, the internal oblique and transversalis, on the inner side of which the loop is made. The needle, re-entering the transversalis and internal oblique, passes through Poupart's ligament and comes out through the skin to the outer and lower

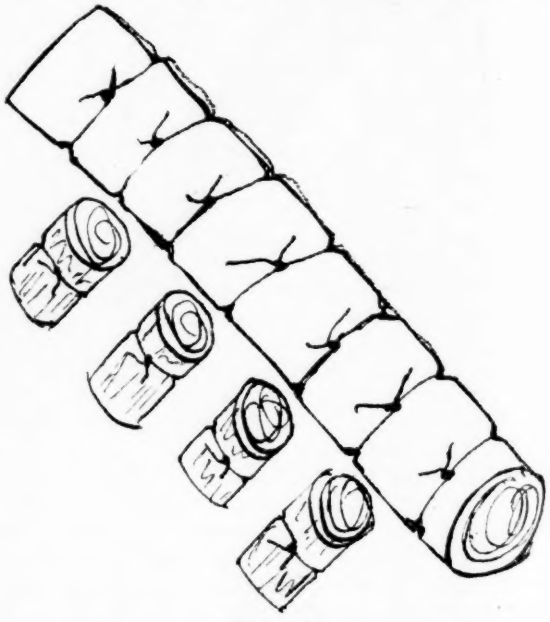

Figure 4.

side of the cut, near the point of entrance. (Fig. 1.) From three to five sutures are similarly introduced. These sutures pull the internal oblique and transversalis below the shelving edge of Poupart's ligament, and are observed to make a firm barrier against any internal force. A double support is formed and any defect is corrected. The sutures are then tied over rolls of sterilized gauze. (Fig. 2.) The spermatic cord then rests on the internal oblique. The external oblique is then closed over the cord. Interrupted figure-of-eight sutures are introduced, bringing the external oblique in apposition with Poupart's ligament. (Fig. 3.) They also approximate the skin, and are tied over a gauze roll. (Fig. 4.) The sutures are usually left two weeks.

The conclusions for this operation are:

1. There are no sutures for the tissues to absorb.

2. There is no additional culture media in which infectious micro-organisms grow and cause deep abscesses.

3. There are no buried, non-absorbable sutures left to irritate the tissues and cause further trouble.

4. There is no necrosis from tight sutures, therefore few, if any, stitch abscesses.

5. The gauze rolls act as elastic cushions which prevent scars from the sutures.

6. The operation completely closes the breech and makes a firm wall.

7. All sutures, after serving their purpose, are removed, leaving only the natural supports.

302 Pillsbury Building.

EVOLUTION IN THE TREATMENT OF CANCER OF THE RECTUM.*

C. H. MAYO, M.D.
SURGEON TO ST. MARY'S HOSPITAL.
ROCHESTER, MINN.

Certain definite results are desired in operations on cancer of the rectum, namely, permanent cure, low operative mortality and a controllable anus, or its best substitute. These results are modified by location, stage of progress and the age and condition of the patient.

The gradual evolution which has led up to the treatment in vogue to-day makes an interesting study. Previous to 1870, operative treatment on cancer of the rectum was but limited in extent, and only performed by the great surgeons of that time; in fact, it was almost limited to nothing, palliation, and lumbar colostomy. Yet the results of these methods compared most favorably with radical operations.

At present a diminishing number of patients present themselves at such a late period that they fall within the limits of this type of surgery. Inguinal colostomy has replaced the lumbar. During the next ten years to 1880 there was a marked advance in all surgery. Instead of there being but a few surgeons with initiative, a large number were making active scientific progress. New and often similar methods of procedure were devised by surgeons widely separated and each without knowledge of the investigations of the others. This progressive spirit, which fortunately continues, resulted in many operations bearing the names of two and even three surgeons who had advanced the principles at about the same time.

In rectal surgery there were developed the circular enucleation of Lisfranc, perineal excision, Deffenbach's incision anterior and posterior to the anus, and the great advance made by Kocher in 1874, when he excised the coccyx to gain access to the rectum. Many surgeons still contend that by this method sufficient space is secured to accomplish the removal of all cases which should be attacked from below. Verneuil also deserves credit for removal of the coccyx at this time.

The difficulties which were most marked during this period were sepsis, which could not be avoided, stricture or incontinence from the loss of the anus, and recurrence, the most serious of all as well as the most frequent. The recurrence most commonly seen was probably from incomplete removal and at times undoubtedly from direct inoculation of the wound by the cancer. The direct inoculation of wounds by both cancer and sarcoma cells is a condition well understood to-day, and many operators to a certain extent avoid this complication by excising the anal and low-lying cancers of the rectum with a Paquelin cautery; others, when the cancer unavoidably contaminates the wound, apply carbolic acid, followed by alcohol, to prevent germination and absorption. Surgically considered, this was an epoch of drainage.

During the years from 1880 to 1890 was developed the germ theory which revolutionized surgery and medicine. This period was one of antisepsis and drainage. Operations in all lines of surgery became more radical. The perineal methods were made more complete. Rehn, a German, and Campenon, a Frenchman, at about the same time brought out the vaginal route for certain cases of rectal cancer, a method which has been so highly developed and popularized by Dr. J. B. Murphy. Steinthal removed invaginating cancers by means of an elastic ligature. In 1883 Volkman opened the sacral canal in an operation for sarcoma. Kraske, at that time his assistant, noticing that no harm resulted, was led to develop his sacral excision method of operation. Now all varieties of sacral exposure bear his name, although variously modified by Bardenheuer and others in being more extensive, by Heinecke, Roux and Rehn and others in preserving the bone by a temporary resection, and by Zuckerkandl in making a parasacral incision.

The difficulties which arose were from shock, which usually meant loss of blood; from peritonitis, as two-thirds of the Kraske operations necessitated opening the peritoneum; and from the attempt to perform radical operations on inoperable cases, as the damage to the bone, loss of blood and open peritoneum were necessary by this method, before the operator knew fully the extent of the disease. The anus had usually been sacrificed; now, where possible, attempts were made to preserve this outlet. Various methods of uniting the distal and proximal bowel were devised. Suture methods frequently failed, or partially failed, leaving permanent fistulæ, as did all methods much too often, were they plastics, Murphy's button or invagination. The Hochenegg method of invagination by passing the proximal end through the anus and suturing to the skin, was later modified by removal of the mucous membrane of the anus. One of the best methods was to draw the proximal bowel through the anus, which was inverted, and make a circular suture union, which is replaced within the sphincter. Lange made a half circular incision anterior to the anus, admitting of its being depressed two inches to reach the proximal end. With the anus saved, it was often found that the extensive mutilation had permanently injured its nerve supply, and when saved intact, that it required the levator ani and internal sphincter to render it functionally perfect in preventing the sudden escape of gas and thin feces.

Gerster states that practically all of these methods of union result in primary or secondary stricture, which is from the character of the surrounding tissue. Most frequently it was found that so much bowel had been removed that a sacral anus was necessary. When an artificial anus is determined on, Witzel, Wilms and Rydygier recommended the division of the glutinus maximus, made at one side of the sacral incision and the suture of the bowel end to a skin incision, thus gaining muscular compression. Gersuny rotated or twisted the bowel sufficiently to close its lumen and sutured. Still, in spite of all methods, only approximately 15 per cent. of these patients secure anything like a controllable anus. The incontinence which ensues is not comparable to those cases of torn or paralyzed sphincter or sacral fistula, as such cases still have the seventeen-inch loop of sigmoid in the pelvis—whose value as a fecal container

* Read at the twelfth annual meeting of the Western Surgical and Gynecological Association, held at St. Joseph, Mo., December 29 and 30, 1902.

was pointed out by Wyeth—with the natural constriction at the top of the rectum to control the fecal current. Yet such cases presenting themselves for relief are often considered as bettered by an inguinal colostomy. The local recurrence, which is so frequent, often causes such a degree of obstruction as to require a later colostomy, a condition which we met in three cases. The direct channel of the colon from the splenic flexure to the outlet leaves no space for a fecal container and renders closure a question of hydrostatics in these operations.

The last decade has seen an advance in methods derived from an analysis of the mortality and failures in the past, and the gain has resulted in the present thoroughness of surgery, and asepsis for antisepsis. The block removal of the rectum and glands where possible from below and in high location of the cancer, the combined abdominal and perineal method of removing rectum, glands and all malignant tissue *en masse,* is the new surgery for cancer of this region. This method is merely the application of principles of the general surgery of cancer, regardless of location, as exemplified by Halsted's operation for the removal of cancer of the breast. It is probable that the removal of cancer of the rectum in the past compares well with the removal of cancer of the breast before the radical operations were made on the lymphatic system, with the exception of the former being in a more septic region. The combined abdominal and perineal method is now advocated for high rectal carcinoma by the pioneers in rectal surgery, Kocher, Kraske, Gaudier, Quenu, Trendelenberg, Abbe, Weir and numerous others.

Cancer in the young is much more serious than in the old, both as to rapidity of growth and early involvement of the glands, although it is frequent that the glands are only involved late in the disease. The average life with cancer of the rectum is given as from one to two years; this may be true in the young, but in the old, if we approximate the commencement, it must often exceed double this length of time.

Allingham considers the removal of cancer, in patients under 45 years of age, as unfavorable; between 45 and 60 years, as more favorable, and over 60 years, still more hopeful. Statistics change from year to year with the ability of the operator, whose judgment increases from his mistakes and failures, and whose ability to select a justifiable operation for rectal cancer, according to the extent, location, fixation, glandular involvement, cachexia and age, or invasion of neighboring organs, such as vagina, uterus, prostate or bladder, becomes more and more reliable. Therefore, statistics mean more to the surgeon who makes them than to any one else. Kraske's mortality in the first ten cases was 40 per cent.; this he has now reduced to less than 10 per cent. The average mortality is still somewhere between 15 and 18 per cent. Hochenegg, in 121 sacral operations, had 5 per cent. mortality and 25 per cent. cures.

Kroenlein (Zurich) answers three questions: mortality of operation, recurrence, and functional disability; 881 cases show that the sovereign method is extirpation, 80 per cent. survive, 14 per cent. are lasting.

The functional result is best when possible to preserve the anus and sphincter. In the discussion Kraske expressed satisfaction in his 120 cases of sacral method, but thinks the combined abdominal sacral method more radical. Gaudier of Lille begins with a laparotomy, and by section of the bowel at the iliac fossa makes an inguinal anus. The peritoneum is cut from the sides of the rectum and below and the rectum forced down by blunt dissection as far as possible, the peritoneum closed and the operation completed from the perineum. Gaudier claims the method is of aid in: first, complete extirpation of the cancer; second, removal of lymphatics; third, the possibility of complete asepsis; fourth, no bony mutilation; fifth, the artificial anus is more supportable and more easily supervised than in the sacral region.

Quenu separates the cancer by sacral operation first, then, if necessary, makes an abdominal incision and inguinal colostomy. Chalat of Toulouse practically performs Gaudier's operations.

In our own work we were compelled some two years ago, by the necessities of two cases, to operate from the abdomen in one and from the abdomen and perineum in the other. During the past year we have operated on four cases in which the combined operation was planned previously. The operation, as described by Gaudier, we modified in regard to the colostomy. Through a median opening the sigmoid is double clamped and cut at a point as low as possible, yet well above the cancer, then invert the mucous membrane and close both ends with a purse-string suture. This renders the remainder of the operation aseptic. The superior hemorrhoidal artery is ligated and the proximal sigmoid segment is loosened and brought through a McBurney gridiron incision in the iliac fossa. This incision is peculiar in the skin incision, being at a distance of one and one-half inches to one side of the muscle separation. The end of the bowel is brought out and sutured to the skin incision; also a few sutures unite the bowel to the peritoneum at the point of exit. This preserves the loop of sigmoid as a fecal container. Prolapse is prevented by sutures from within, the muscle separation and sigmoid curve of outlet with skin covering for compression give a fairly controllable anus at a position where the patient is enabled to give it proper attention. If the median incision discloses an inoperable condition, that is, inoperable from a curative standpoint, from metastasis in glands or neighboring organ involvement, an inguinal colostomy is made and the median wound closed.

Colostomy, as usually performed, has been by the lifting of a loop of sigmoid through an abdominal iliac incision. The loop is supported by one of the various methods and the bowel is sutured to the peritoneum and skin, forming a true funnel-shaped hernial opening in the abdominal wall; that is, skin and peritoneum in contact. There was often prolapse following late after operation, to avoid which the loop of sigmoid was caught up at such a point as to render the descending colon under slight tension in the wound, thus rendering the closure of the outlet a question of pressure against a descending flow. The best operation is that of Mixtere, in which the sigmoid loop is drawn through a McBurney gridiron incision, and a rectangular skin flap pedicle attached at one end is drawn through an opening in the sigmoid mesentery. The skin flap is sutured back to place at the free end and sutures applied to the bowel, peritoneum and skin. When the loop of bowel is cut through, this skin covering of the bowel acts as a valve when compressed by a pad.

To sum up the main objections of the past, we have:

1. Ineffectual removal with local recurrence so common in the perineal type.

2. The extensive mutilating character of the Kraske before operative conditions were known.

3. The frequent failure of all methods of union of proximal and distal portions of the bowel, which, when united and anus saved, with the destruction of the levator ani and internal sphincter, represented but one-third of the controlling apparatus of the bowel.

4. The frequent formation of stricture either cicatricial or cancerous following operation necessitating inguinal colostomy.

5. The straightening and tension of the sigmoid destroyed it as a fecal container.

6. That sentiment and not chance has proven the main reason for continuing to place an uncontrollable anus in a comparatively inaccessible situation.

The gain in the combined operation has been in a selection of the operation to the case, either radical removal *en masse*, with all glands, fat and connective tissue or a colostomy for palliation. The retention of the sigmoid as a fecal container and the peculiar formation of the anus, giving a fair degree of control in an accessible situation.

SOME REMARKS ON SCLEREMA NEONATORUM,

WITH REPORT OF A CASE WITH AUTOPSY.

E. R. STILLMAN, M.D.
TROY, N. Y.

Sclerema neonatorum is a rare disease. Up to the present time I have been able to find but seven cases reported in America, and a careful review of the literature of Europe affords but comparatively few examples of the strange condition. The obscurity of the etiology of the malady and the scarcity of clinical reports of cases with autopsies, as well as the meager and unsatisfactory descriptions of the same found in most text-books, render doubly interesting the report of a typical case, and afford an excuse for a perhaps too lengthy description of the clinical picture of the disease.

Uzembezius, a physician of Ulm, in a work entitled an "Ephemeris of Natural Curiosities," published nearly two centuries ago, described an infant, born at term, which from top to toe became rigid and cold, resembling a piece of flesh dried by fire. This is regarded as the first recorded case of infantile sclerema, and it was at that time ascribed to maternal impressions, since the mother of the baby had spent much time in the churches, worshipping the images and statues found there.

To Underwood, however, an English physician, belongs the credit of having first recognized and described the disease, a description, too, so vivid and so true as to have left little to be added or to be taken away. His observations were particularly noted in France, and the condition most thoroughly studied there, although for many years it was confounded with a very similar condition, œdema neonatorum. This disease presents many features in common with sclerema, but differs in so many respects as to leave little doubt that they are essentially separate and distinct. Andry (1781), Leger (1825), Billard (1839), Villaix (1849), all recognized, studied and described the malady and developed many and ingenious theories to account for it. It remained for Parrot, however, the brilliant Parisian pediatrist, to establish the fact that sclerema neonatorum was a distinct clinical entity, although the conclusions of this observer have been somewhat modified by the studies of more recent years.

The subjects of this disease are usually found among the premature, weakened, poorly-developed infants of the foundling asylums. Cases occurring in private practice are exceptionally rare, although Parrot cites cases developing in well-nourished, robust and well-fed infants. Whether or not hereditary syphilis plays a rôle in the etiology is still a disputed point. Cases have been reported in which improvement or even recovery has followed treatment by mercurial inunction, but there is room for much skepticism as to the correct diagnosis in such instances. Within the past decade attempts have been made to isolate specific bacteria and to demonstrate that they were responsible for the development of the disease, but the number of observations in this direction is as yet too few for any definite conclusions to be deduced.

The affection, which is characterized by an induration of the skin and subcutaneous tissues, does not, as a rule, develop immediately after birth, but the symptoms are first noticed within the following seven to ten days, although according to Hennig they may be delayed as late as the seventh month. It is doubtful, however, whether such late developing cases should be regarded as instances of genuine sclerema neonatorum, but that they should rather be classed with scleroderma. In the first place, they do not correspond clinically with sclerema, they more frequently end in recovery and show a tendency for the induration to occur in isolated areas. It seems reasonable, therefore, to consider those cases which develop late as scleroderma infantorum corresponding to scleroderma adultorum, than to regard them as instances of true sclerema neonatorum as described by Underwood.

The symptoms may develop suddenly with no particular warning, may follow or complicate an acute disease, such as pneumonia, or they may be preceded by a variety of indefinite signs of general disturbance, such as vomiting, diarrhea with greenish stools, obstipation, convulsions, etc. The infant may become thin and emaciated, the eyes sinking into the orbits, the skin of the face taking on a sallow tint, becoming wrinkled, wizened, like the face of a little old man; or the disease may appear so suddenly that when first seen the characteristic induration may be the first and foremost symptom to which our attention is directed.

With such an onset the changes in the skin, which represent the essential feature of the disease, develop. In the invaded region the skin becomes swollen, shiny, losing its normal folds, appearing as if under tension, very like edema, but harder, firmer, showing little or no evidence of pitting on pressure. The elasticity and suppleness of the skin are gone; it is no longer possible to pinch it up into folds by the fingers; it is cold, clammy, greasy to the feel, for all the world like the outside rind of a ham. It is hard, as if glued down to the subcutaneous tissues; it is impossible to slide skin over subcutaneous parts, skin, muscle and underlying bone appearing to be fused completely together.

The color of the invaded areas varies from a dirty yellowish jaundice-like color to a livid blue black, the tints being comparable to the array of colors afforded by an area of ecchymosis slowly absorbed. The temperature of the part is always much reduced.

The amount of surface of skin involved varies within wide limits in different cases. It may remain circumscribed, death occurring to effectually check the progress of the disease. Again the skin of the lower extremities and trunk may be alone affected, or the whole surface of the body may take part in the process. The part which first shows the thickening may also vary. Most often the skin of the buttocks or thighs appears to be earliest diseased, from there spreading upwards and downwards on the trunk and on the lower extremities. It may then become general over the whole surface of the body. On the other hand, the skin of the face may be the first point

to show the induration, more particularly in the region of the cheeks.

As a consequence of the thickening and hardening of the skin and subcutaneous tissues, the affected parts become stiff and inflexible. If the face be involved, the mouth and cheeks are set as if moulded, mask-like, resembling the face of a doll, crying, sucking, swallowing being alike impossible. If the limbs be attacked the members are swollen, blue black to dirty brownish yellow in color, hard and rigid, extended or slightly flexed, but stiff and immovable. When the disease becomes general the infant lies motionless, with or without very feeble cry, as stiff as and still as death, with scarcely any respiratory movement and with an ever-weakening pulse. At this stage of the disease Trousseau and Parrot were able to lift the body by catching hold at either end, as one would raise a stick of wood, and it has been possible to balance the body on the radial surface of the hand placed under the back, just as one would balance a figure of marble or of metal.

Such, in short, are the characteristic symptoms of sclerema neonatorum. Variations in intensity and in extent of the induration occur, but correspond in general to the above description. In striking contrast, however, to this is the absence of general manifestations of disease of any of the vital organs. No heart or lung disease, no disease of the nervous system or gastrointestinal tract has ever been found that might be considered constant in or in any way causative of sclerema. There seems rather to be a universal prostration of all the vital functions. The malady runs its course slowly but fatally without giving the slightest clue in regard to the primary cause of the trouble. In the skin itself where the morbid process is mainly localized, there occur no microscopic changes that can be regarded as peculiar to or characteristic of the malady. Atelectasis of the lungs, congenital defects of the heart and morbid processes in the digestive tract have been described, but must be regarded rather as accidental complications than as having anything to do with causing the disease. Money described two cases complicated with paralysis, and concludes that the disease may be a trophic disturbance. Numerous hypotheses have been advanced to explain the peculiar clinical changes, but we must admit that from a practical standpoint we know little or nothing of their etiology, being able neither to retard nor to arrest its advance. Recovery rarely if ever occurs, the infant after illness of a few days to a week or more dying from the extreme prostration or asthenia.

Turning now from a general survey of sclerema, the history of a particular case may prove interesting.

J. K., full term infant of healthy parents, male, seven days old, at birth was quite cyanosed; extremities, ears, lips, face all were blue and livid, presenting the characteristic appearance of a "blue baby." Careful auscultation of cardiac area, however, discovered no audible murmur. Condition lasted forty-eight hours and gradually disappeared, leaving no trace. Baby nursed, bowels moved and urine voided in an apparently normal manner.

During night of seventh day baby cried almost incessantly and with no apparent cause, bowels moving and urine being evacuated as usual.

EXAMINATION.—The following morning the following facts were disclosed: The baby refused to nurse and seemed generally tender to the touch. Penis swollen and infiltrated with hard edema, so much so as to effectually close preputial opening. Skin of same was glossy, shiny and did not pit on pressure. Skin of scrotum was also swollen, hard and board-like, shiny and cold. Questioning revealed the fact that the little patient had not urinated since the night before. Percussion over hypogastrium revealed dulness and with a view to relieving the bladder a hasty circumcision was done and an unsuccessful attempt made to pass a catheter. Under a hot bath and warm fomentations, however, the bladder relieved itself, but nevertheless the hard, board-like infiltration continued and was rapidly spreading. The cord had not yet separated from the umbilicus, but there was no evidence of infection or inflammation in its neighborhood. Temperature per rectum 98.5 F.

On the following day the hard induration was still present and had spread upward on the trunk and downward on the legs. The least touch seemed very painful, causing the baby to cry for some time, whereas otherwise he was quiet. Bowels moved sluggishly and small in amount, greenish in color; urine also small in amount, stained diaper light yellow. It was impossible to obtain any for examination. Temperature 97. At this time a blood examination showed 6,000,000 erythrocytes per c.mm., with no deformity of same and no nucleated reds. Owing to difficulty in obtaining blood it was impossible to count white cells; but from study of ordinary smears they appeared to be less than normal in numbers and mostly of mononuclear type. Cultures taken from the blood were negative.

The next day the sclerema had spread over the whole of the extremities and midway up the trunk. Skin was hard and leathery, could not be pinched up into folds, was densely adherent to subjacent, all seeming to be fused indefinitely together.

The following day, the fourth of the illness, the conditions were much worse. The infiltrated areas were turned a deep bluish black, particularly the dependent parts, and were painful on least pressure. Bowels moved and urine voided, but very scanty in amount. Child refused to take any but slight amount of nourishment by a spoon. Legs were flexed at about an angle of forty-five degrees, were stiff and firm, impossible to straighten or bend. Sclerema had extended on chest, but arms and face were not involved. Temperature 96, rectum. Death the same afternoon.

AUTOPSY.—This was made the following day at 9 a. m., fourteen hours after death. It is important, especially on account of the negative results. The following changes were noted. Body slightly emaciated. Postmortem rigidity not well marked. Surface of body presents a mottled bluish-black to yellowish tint, the former color being most developed over dependent parts and on skin of extremities. Skin of legs, thighs, feet, scrotum, penis, pelvic regions, extending behind up to middle of back and in front midway to umbilicus, is swollen hard, board-like, stiff, glossy, not pitting on pressure. Skin can not be pinched up into folds by the fingers, neither will skin glide over subjacent tissues. The dark blue-black color is most developed in region of anus and penis, the circumcision wound of which appears gangrenous. Umbilical cord separated and stump is normal looking with no signs of inflammatory reaction about it.

On section, subcutaneous fat exceedingly small in amount. Skin of lower abdomen distinctly thickened, being three times the thickness of that of upper abdomen. On section it appeared very firm and fibrous, of mottled orange to lemon yellow to grayish color, subcutaneous fat showing a distinct reddish tinge. No serum exuded from cut surface. Heart and lungs normal with no sign of any congenital defect. Liver mahogany color, extending four cm. below free border of ribs with no macroscopic change. Gall bladder distended with thick tenacious black bile, which could not be squeezed into duodenum, although dissection of common duct disclosed no obstruction. Stomach distended with gas extending below to umbilicus and 1½ cm. to right of median line. Urinary tract normal; spleen normal. Mucous membrane of small and large intestine pink, soft and velvety with no signs of swollen follicles or of ulceration.

Such in short, were the results of the postmortem examination. Cultures were taken from the heart, spleen and peritoneum, but there occurred but a few colonies of *Staphylococcus albus* and variety of the color bacillus. That the presence of these organisms was accidental and not due to general infection I feel convinced, because of

the lack of any symptoms pointing to an infective process such as fever, with enlarged spleen. Microscopic examination of tissues revealed no change. In the skin, however, corresponding to the marked clinical symptoms, we should expect marked pathologic peculiarities. No change, however, has been found at all commensurate with the macroscopic appearance. Northrup reported a typical case in which the microscope revealed nothing especially abnormal. Parrot found hardening and atrophy of the skin and rete malpighii, the cells appearing indistinct and forming a fused mass. The subcutaneous fat appeared atrophied and the interstitial fibrous connective tissues increased. The blood vessels were shrunken. In the present case the corium seemed thickened, the cells and fibers composing it having a homogeneous granular, hazy appearance, suggestive of cloudy swelling. The subcutaneous fat appeared normal, the interstitial fibrous tissue being little if at all increased.

Ballantyne found a "dried-out skin," some thickening of the layers with some diminution of the subcutaneous fat. The pathology and the etiology are very obscure. What relation these slight skin changes bear to the profound prostration of the disease is difficult to explain. Henoch examined the nervous system from two cases and found nothing abnormal.

From the date of its first description many and ingenious theories have been advanced to explain its occurrence. Underwood believed it was due to a spasm of the skin in consequence of breathing bad air. Leger thought it was due to an improper and incomplete development of the intestinal canal. Parrot taught that sclerema was not a disease, but only a symptom, an end-stage of a general condition of malnutrition, which he termed "arthrepsie," and that the thickening and drying up of the skin was due to the loss of fluids in consequence of diarrhea and to the absence of any reparative effort on the part of the other cells of the body. Langer, in 1881, advanced the theory that in consequence of the lowering of the body temperature, the palmitin and stearin, which form the principal part of the adipose tissue of infants, solidify, thus causing the thickening and hardness. This may be considered but a modification of the theory of Parrot that the reduction of temperature is consequent to the general condition of mal-nutrition and mal-assimilation, and following this heat loss solidification of the subcutaneous fat occurs. In other words, the skin changes depend purely on a chemical and physical change in the cutaneous fat, regardless of any vital activity on the part of the body cells. Were this true we might reasonably expect a like change to occur post-mortem in the case of infants. Ballantyne asserts that the skin changes are the result of the "drying out" of the skin incident to the diarrhea, and this view seems to be favored by Wiederhofer and Soltmann. This case, however, as well as that of Northrup and others, seems to prove that a preceding diarrhea is not essential to the development of the disease, nor a necessary symptom of its progress. Schmitt, in 1893, reported three cases in which he isolated micro-organism, mainly staphylococci, from the tissues, and he maintained that sclerema is due to a general infection with a definite micro-organism, but this observation has not as yet been corroborated by other observers. Pathologic evidence, on the other hand, shows no change at all comparable to the changes observed in general infection with any known organism. It may be, however, that the immature tissues of the newborn react to bacteria and their toxins differently than the mature tissue of adults with which we are more acquainted. It seems to the writer more plausible to regard the condition as the result of an autointoxication from improper functional activity of the gastrointestinal tract, the changes in the skin being secondary to the retention of the poison, and its direct action on the skin, incident to an attempt at elimination.

HYPERTROPHY OF THE SYNOVIAL FRINGES OF THE KNEE JOINT,

WITH A REPORT OF TWELVE CASES.

EDVILLE G. ABBOTT, M.D.
ORTHOPEDIC SURGEON TO THE MAINE GENERAL HOSPITAL.
PORTLAND, ME.

This disease has been described from time to time by various writers in medical journals, but as yet there has been only slight mention of the subject in works on surgery. The different authors have included this condition in their description of floating cartilage, internal derangement of the knee-joint and chronic synovitis, but have given little consideration to it independently. In designating the disease the profession have used various terms, such as rheumatic joint, torn cartilage, strained ligaments and synovitis; and undoubtedly some cases of it have been diagnosed as tuberculosis of the joint, which it sometimes resembles in its first stages and for which it might easily be mistaken.

From the cases which have come under my observation during the past year and a half I have selected twelve, typical in character, the treatment of which has extended over a sufficient length of time to allow definite conclusions to be drawn regarding them. Eight of these cases I operated on; the remaining four were treated by mechanical means. The unsatisfactory nature of the information contained in the text-books has led me to endeavor to formulate my own experience and its results.

ETIOLOGY.

The etiology is obscure. In a few of the cases traumatism plays an important part, while in others it has been impossible to associate injury with the beginning of the disease. In order to explain this condition in those cases where it is not traceable to injury, the complicated movements of the normal knee and the intricate distribution of the synovial membrane should be considered.

The knee-joint, like all diarthrodial joints, is lined with a synovial membrane, except where the articular cartilages are in contact. Here no membrane is found, except at the edge of the cartilage, which the membrane overlaps for two or three millimeters before merging into the cartilaginous structure. The inner surface presents a smooth shining appearance, interrupted (especially where the membrane folds to pass from one surface to another) by the synovial fringes, which are villous structures of varying size and length, somewhat resembling intestinal villi, the largest being perhaps one centimeter long. They are richly supplied with blood vessels, each villus containing a convoluted twig of an artery. Some of the fringes are, however, merely hernia-like protrusions into the joint of small masses of fat covered by membrane, which fill up unoccupied spaces.

The articulation between each condyle and the opposed almost flat surface of the tibia does not exactly form a hinge-joint, though strongly resembling one; and extension and flexion, the movements of which it is capable, are produced by a combination of gliding, rolling and rotation. In the movement of extension the condyles move parallel to one another, both gliding and roll-

ing, until extension is nearly completed; and then the anterior part of the rolling surface of the external condyle having already come into full contact with the tibia, the femur is rotated inward on the tibia and the joint is fully extended. In the erect attitude the knee-joint, like the hip, is in a great measure maintained in the fully extended position without muscular effort; but there is some difference of opinion as to the manner in which this is effected.

Langer and Humphrey hold that the line of gravity of the body falls in front of the axis of movement of the knee-joint, and the tendency is thus to over-extension, which is resisted by all the ligaments of the articulation. If this view be correct, any strain produced, for instance, by overweight, long standing in one attitude or injury, would cause the knee to overextend, stretching the ligaments and allowing the joint, when moved, to deviate from its normal position. With this condition it is almost impossible for the fringes to escape being pinched, so complicated are the movements.

On the other hand, Meyer maintains that the line of gravity falls slightly behind the axis of movement, and that the stability of the joint depends mainly on the association of rotation with the beginning of flexion; for while the femur is prevented from rotating outward by the ileo-femoral ligament, which in its turn is kept tense by the weight of the body acting on the hip-joint, the tibia is fixed by its connection with the foot. Rotation between the femur and the tibia being thus impossible, flexion can not take place, and the joint is fixed.

If we accept the explanation of Meyer, which has the support of the majority, a weakened condition of the arch of the foot would have the same tendency to stretch the ligaments of the knee by preventing fixation of the tibia.

It seems to me that the latter condition would explain many cases, as a weak pronated foot is very closely associated with this disease; and while I have not found it in all cases, it has been present in many, and the use of a plate to support the arch has been of great service in remedying the trouble in the knee-joint. In those cases attributed to trauma it may result from a sudden wrench with the joint in an unfavorable position; or pressure of the joint against some hard surface daily may cause a thickening of the tissues just posterior to the patella tendon. This thickening pushes back the fringes into the joint between the surfaces of bone where they become pinched, and the joint motion causes a continuation of the pathological process.

PATHOLOGY.

Pathologically the disease consists in a nodular enlargement of the synovial fringes which project into the joint, with more or less thickening of the membrane. In the commencement of the disease only a slight increase of vascularity and a tendency to thickening of the fringes is noticeable. The membrane is slightly red around the base of the villi and the fluid which is occasionally present is insignificant in amount and ordinarily yellowish in color. This condition is followed by an increased hypertrophy of the synovial fringes, which varies from a slight and almost imperceptible hyperplasia to a condition where the fringes resemble a small bunch of half-grown grapes.

The synovial membrane begins to encroach on the cartilages. Normally it runs into the cartilaginous border for two or three millimeters, but now the hypertrophied membrane sends out processes which creep in still farther. The fluid increases in amount in a few cases, but in the majority it is absent. Microscopically the fringes show marked dilatation and branching of the vessels, and a large increase in the amount of connective tissue which is rich in cells. It is impossible to obtain growths in culture tubes, and no trace of bacteria can be found with the microscope.

SYMPTOMS.

The first symptom noticed by the patient is generally some difficulty in walking. Often on extending the leg he feels a slight pain, or he may be seized with sudden pain and fall on his knees. In some cases where the fringe is pinched the injury to the membrane is so extensive that an acute attack of synovitis occurs, and the patient is obliged to remain quiet some weeks. With rest the joint soon resumes its former condition with, however, a slight increase in the size of the fringes. In other cases the process is more gradual without any acute symptoms.

This condition continually grows worse, until there is partial or complete loss of function of the joint, and the patient is sometimes obliged to resort to crutches. In some cases inability to extend the leg appears, and the quadriceps extensor muscle atrophies. The patient complains of a sense of insecurity of the joint, and rarely a dull pain is present on motion.

Examination shows a slight bulging of the thickened membrane on either side of the patella tendon, generally more marked on the inner side. A little higher up the small portions of the membrane can easily be felt under the finger. The joint shows no redness or heat, except in acute attacks, and on motion there is absence of grating. Measurements seldom show much enlargement, and movement can be carried beyond the usual limit. The ligaments are lax, and some lateral motion is present.

TREATMENT.

The treatment of these cases is mechanical and operative. And early diagnosis is very important, as it is at this time that much can be accomplished by conservative methods. As the disease is probably due to a small portion of the fringe being caught between the surfaces of bone, resulting undoubtedly in most cases from a strain of the ligaments, which allow of too free motion of the joint, attention should first be given to ascertaining the cause.

Mechanical Treatment.—The mechanical treatment, therefore, consists first in correcting any condition that may exist which tends to strain the muscles and ligaments of the joint. In my hands the use of hot air applied at least every other day has seemed to be very beneficial. Strapping with adhesive plaster has also been of assistance, not only because of the pressure which it exerts on the membrane, but also because it limits the joint motion.

In those cases where flatfoot is present a plate will aid much in bringing the joint surfaces into a normal position, and by fixing the foot the knee is made more stable. A brace which limits movement will be found useful in cases where the ligaments are lax, as it lessens lateral motion and prevents the leg from hyper-extending. Keeping the joint at rest for a long period by encasing the limb in some fixed dressing, such as plaster of paris, has proved worthless in my experience, as it is impossible to exert any appreciable influence on the hypertrophied fringes by simply fixing the joint.

Operative Treatment.—Many of these cases have progressed to such an extent that conservative treatment

is of no avail, while in others the time required for the application of such measures must be considered, and we are obliged to adopt a more radical method.

If, when examined, the fringes have increased sufficiently to be easily detected by palpation, it is useless to subject the patient to the waste of time and expense by advising mechanical treatment. The operation presents very little difficulty and is carried out in the following manner:

The usual U-shaped incision through the skin is made, commencing at either the inner or the outer condyle, passing downward and inward to the median line, crossing the patella tendon about one inch below the patella, and finally passing upward on the front of the knee to a point opposite where the knife was first inserted. The flap is dissected back, exposing the ligaments of the joint. A lateral incision on either side of the patella is then made through the capsule and the membrane is revealed to view.

It will be found unnecessary to divide the patella tendon, as all the diseased part can be reached without so doing, and it lessens the severity of the operation. After removing the fringes the incision is closed with or without irrigating the joint, care being used to approximate the two synovial surfaces, as thus there is less liability of infection. The skin sutures are taken and the wound dressed, after which the limb is placed in plaster with the leg fully extended.

There is considerable rise in temperature in all cases during the first few days. The limb is left in plaster for two weeks, after which motion is commenced.

NARRATION OF CASES.

To illustrate the history and treatment of this disease I report the following cases, which have come under my care during the last year and a half:

CASE 1.—L. W., a woman 42 years of age, first seen by me Nov. 11, 1900. Some two years before, the patient injured her left knee in stepping from a carriage to the sidewalk. The following day the joint was swollen, and motion became painful. This condition rapidly improved, and in two weeks' time there seemed to be no trace of the injury left. About three months later she experienced some difficulty in climbing stairs. This condition gradually grew worse, with an occasional acute attack of synovitis, whenever the knee was subjected to any unusual amount of work. Inability to extend the leg was first noticed in August, 1900; soon she was obliged to place the foot very carefully in order to prevent falling; and finally crutches were required. The first examination revealed a slight swelling of the joint, and small masses could be detected on either side of the patella, which slipped from under the finger. There was complete absence of fluid, and no grating on motion. The quadriceps extensor muscle was almost completely paralyzed with marked atrophy of the thigh. Motion was painless and unrestricted. Surface temperature and color normal. Family history good.

A diagnosis of hypertrophy of the synovial fringes of the joint was made, but I was at a loss to account for the paralysis, as there was complete absence of spinal symptoms. Removal of the fringes was advised, but the patient was unwilling to undergo an operation, so hot air treatment accompanied by strapping with adhesive plaster was commenced. This was continued for four months, with a steady improvement. Later, massage was used, and the patient was discharged April 5. The masses had almost entirely disappeared, and extension of the leg was normal.

Up to the present time there has been no return of the symptoms, and the patient walks without difficulty.

CASE 2.—C. F., 38 years of age, a housekeeper by occupation, came to my office in December, 1900, giving the following history:

About eighteen months before, while she was walking on the street, her leg suddenly gave way under her and she fell on her knees. The following day a little tenderness in the region of the patella was noticed. The matter passed entirely from her mind, until she had a similar experience about six weeks later. The frequency of these attacks increased, until on account of the difficulty of walking, she was unable to take proper exercise. Only once was an attack followed by swelling of the joint, and this lasted but a few days.

On examination I found marked hypertrophy of the fringes, which could easily be felt around the patella. The ligaments were stretched and some swelling was present, although there was absence of fluid. I advised an operation for the removal of the fringes, which was performed the following week. The limb was placed in plaster for ten days, when passive motion was commenced. The patient made a good recovery, with normal motion of the joint. There has been no return of the symptoms, and the gait is natural.

CASE 3.—C. W., man, aged 32. This patient was referred to me by his family physician for examination, Dec. 16, 1900. For the previous six years he had been lame in the right knee joint. At the beginning of the disease he had received the various rheumatic remedies without result. Later the leg had been placed for some time in a plaster cast, and was somewhat improved after its removal. For the previous two years the patient had experienced more or less difficulty in walking, and the night before he came to me he was suddenly thrown to the ground by his leg giving way under him.

I found on examination a slight thickening of the synovial fringes and much laxity of the ligaments. There was absence of pain, heat, or redness, and the family history was good. An operation did not seem justifiable, so I advised the use of hot air and adhesive strapping with a brace, which would not allow any lateral motion.

Patient was under treatment about three months. The fringes almost entirely disappeared, and he has experienced no difficulty since.

CASE 4.—A. M., a woman of 26. I saw the patient for the first time Jan. 2, 1901, at her home during an acute attack of synovitis of the right knee. She gave a history of repeated attacks occurring in the previous three years, which would subside in a few weeks, leaving the knee in a weakened condition. There had been a steady enlargement of the joint. Family history good. Examination showed much swelling, with some fluid in the joint cavity. Motion was painful, and the patient's temperature was 100.4. It was impossible to make a diagnosis, so I placed the limb in plaster, putting the patient in bed.

Two weeks later I removed the plaster, finding the joint much reduced in size, and could easily feel the enlarged fringes. I was still somewhat in doubt, so again put it in plaster for ten days. At the end of this time the fluid had entirely disappeared, and I found only a thickening of the membrane. I advised an operation, which was performed one week later. The fringes were found to be much thickened, and a large amount of tissue was removed. The joint was irrigated and closed.

Movement was commenced in two weeks, and the patient recovered in two months, with normal motion. During the after treatment I found the arch of the foot considerably flattened and with the use of a plate the joint improved much more rapidly.

CASE 5.—L. C., man, aged 35. Patient was first seen by me Jan. 23, 1901. For the past three years he had had trouble with the left knee. A feeling of insecurity was always present, and at different periods motion had been painful. Had fallen several times, but no swelling was noticed afterwards. Family history good. Examination showed slight enlargement of the left knee, and small masses could easily be felt in the joint. The longitudinal arch of the left foot was flattened and painful under pressure.

It was impossible for the patient to wait for conservative treatment, so an operation was advised and performed the following day. A large amount of tissue was removed and the knee irrigated.

Recovery was uninterrupted, and the patient returned to his home February 19, motion being nearly normal. A plate was made for the left foot and apparently was a great help in the after-treatment. A subsequent examination shows no tendency in the disease to return, and the gait is normal.

CASE 6.—W. A., man, aged 29, engineer by occupation. The patient had been well until two and a half years before. While stepping from a cab one night he was seized with a sudden pain in the right knee. The following morning the joint was swollen and painful, but with rest these symptoms subsided in a few days. Some months after this he noticed when walking that the leg suddenly flexed and, in placing the foot, he was obliged to use care to avoid falling.

He was seen by me for the first time March 26, 1901, and examination showed a very lax joint, with small masses around the patella. The right foot was flat, with marked tenderness under the heel. There was so little thickening around the knee joint that an operation was not advised. Hot air treatment, combined with adhesive strapping, was begun, an arch was placed under the foot, and an immediate improvement was noticed. At the end of three months it was impossible to detect any thickening around the knee, and the joint was apparently in a normal condition.

CASE 7.—E. B., woman, aged 34. First seen by me April 17, and gave the following history:

For the previous year she had experienced some discomfort in the right knee on getting up from the floor. This condition gradually grew worse, until there was considerable difficulty in walking and climbing stairs. Extension of the leg caused a darting pain at times, and there was a sense of insecurity about the joint.

Some two weeks previous to this the patient, after a long drive, found the knee so painful and swollen that she was unable to use it, and was obliged to have assistance to alight from her carriage. The family physician was called, and found some swelling and redness. Hot packs were used, followed by strapping, and she was not allowed to walk. Examination showed a small amount of fluid and marked hypertrophy of the synovial fringes. The arches of both feet were flattened with some tenderness.

As the patient was going out of town for the summer, continued strapping with adhesive plaster and plates for the broken arches was advised. She returned in the fall, and in consultation with the family physician I advised an operation. This suggestion, however, was not adopted, and the hot-air treatment and strapping commenced. Treatment was continued for some ten months with improvement, and at the present time the joint is in a very good condition and gives no trouble whatever.

CASE 8.—R. W., woman, 37 years of age; first seen by me June 5, 1901. For the previous four years her left knee had been swollen and painful at times. Had often fallen when stepping from her carriage, and during the past year had not been able to raise the foot from the floor when sitting; had been obliged, when walking, to swing the whole limb to prevent the leg from flexing. Examination showed slight effusion with marked hypertrophy of the synovial fringes. The patient was unable to extend the leg by muscular effort, and there was much atrophy of the thigh. The arch of the foot in this case was also flattened.

Operation was advised, as any other form of treatment seemed hopeless. A large quantity of tissue was removed from the joint, after which it was irrigated and placed in plaster. In two weeks' time motion was commenced. The patient made a good recovery, and in three months' time was able to extend the leg at will. There has been no return of symptoms, and the patient walks as well as formerly.

CASE 9.—E. J., woman, 23 years of age. First seen by me Aug. 13, 1901. About two years before patient noticed some difficulty in left knee when playing tennis. Sudden movements were painful, and at times fixation of the joint was impossible. This condition grew gradually worse, and the patient repeatedly fell when walking. A knee-cap was worn for a while, but gave only temporary relief. Examination showed very lax ligaments, and motion in all directions was more than normal. The joint was somewhat enlarged, and small masses could be felt all over the anterior surface of the knee.

An operation was advised, but was delayed until the following November. Extensive disease of the fringes was found and a considerable quantity removed. The leg was placed in plaster for two weeks, after which motion was commenced.

The case did well until the fourth week, when sciatica of a violent type complicated matters, and I was obliged to place the leg at rest for some time. Firm adhesions formed, which were subsequently broken. This was followed by a renewal of the sciatica, and I was again obliged to put the leg at rest. Since that time the leg has been worked gently, and motion to a right angle obtained. The joint continues to improve, and undoubtedly full flexion will eventually be attained.

CASE 10.—M. F., man, aged 26. First seen by me Oct. 16, 1901, at the Maine General Hospital in consultation with Dr. Brock. In December, 1900, patient fell from a horse, injuring his knee. This was followed by swelling and pain, which lasted some weeks. After recovery from the fall he was able to walk, but the joint remained weak, and was very unstable. Some months later this condition became aggravated and the leg would flex on the thigh when the patient was walking, causing him to fall. He was finally obliged to use crutches.

Examination showed a small effusion into the joint, and small bodies could be felt there. The synovial membrane was thickened around the patella, and the ligaments were very lax, allowing much lateral motion. An operation was advised, and was performed the following day. All the fringes were removed and the limb placed in a fixed dressing.

Motion was not commenced until November 16, when ether was given and the adhesions broken. The patient made a good recovery, and was discharged November 26. At the present time he has good use of the joint and is apparently well.

CASE 11.—H. W., a woman, 26 years of age; seen for the first time Nov. 24, 1901. About four years previous to this time the patient noticed slight soreness around the left knee after walking. The difficulty was so slight that it received no particular attention until the following year, when she consulted a physician, who advised anti-rheumatics and a knee-cap, from which she seemed to get some relief.

About two years ago she had a fall, striking on the knee. This was followed by an acute attack of synovitis, from which she soon recovered. Since then the patient has had repeated attacks of acute inflammation. Examination showed some thickening around the patella, with very little fluid in the joint. The ligaments were very lax, allowing considerable lateral motion.

As pain had been quite a prominent symptom, an *x*-ray picture was made, which showed the bones to be in a normal condition. The family history was negative. An operation was advised. The fringes were found to be much enlarged, and a considerable amount of membrane was removed. The joint was irrigated, and a small elliptical piece of the ligament was removed on each side of the patella.

The patient made a good recovery. Motion was begun at the end of the second week, and complete flexion was attained at the end of two months. At the present time there is no difficulty in walking, and she can use the knee with as much ease as the other.

CASE 12.—J. M., man, 33 years of age. First seen by me Dec. 12, 1901. Family history good. About two years previous to this time he noticed a tender spot under the right heel, which caused considerable pain to him when walking. A short time after this the right knee suddenly gave way under him while walking, and he was confined to his bed for two weeks with acute synovitis. There was a repetition of attacks until his condition became so serious that he was obliged to use crutches.

Examination showed marked thickening around the joint, with numerous masses which slipped from under the finger.

There was inability to extend the leg, and much atrophy of the thigh. The arch of the right foot was flattened and painful.

An operation was advised and was performed the following week. The fringes were found much enlarged, and a considerable amount was removed. There was a good deal of swelling following the operation, but this rapidly subsided. Recovery was good, the patient is now able to walk without aid, and motion is normal.

CONCLUSIONS.

From my observations it seems to me that such cases should be considered independently, and not included among the other diseases of the knee-joint. A thorough microscopic examination of the tissue which was removed shows it to be a simple inflammatory tissue, and not due to any micro-organism. While the etiology is obscure, it evidently is due to some fault in the weight-bearing structures of the lower extremity, which causes the ligaments of the joint to become lax.

In all the cases which I have examined since the matter was brought to my notice a flattened arch has preceded the knee-joint trouble, and the use of a plate has been of great service in treating the disease. The matter of diagnosis is not difficult, although a torn cartilage somewhat resembles this condition. Examination of the cartilages was made in all the cases where operations were performed, and in all they were found intact.

It has been impossible to account for the paralysis of the quadriceps extensor muscle, which I found in three instances; but in several of the cases operated on, where it did not exist before the operation, I have found a similar condition afterwards, which was the last symptom to disappear. This shows that sometimes this condition does occur when there is very little to cause it. The question whether a case should be treated by mechanical methods, or whether it should be operated on, is a matter which must be left to the judgment of the surgeon; as some cases which seem doubtful yield easily, while others which are apparently slight will not improve until the fringes are removed.

THE USE OF A MYDRIATIC AFTER THE AGE OF FORTY-FIVE.

HORACE M. STARKEY, M.D.
CHICAGO.

(Concluded from p. 1078.)

THE THEORY AND PRACTICE OF PROMINENT OPHTHALMOLOGISTS.

In the letters sent out the following questions were asked:

1. What is your practice in regard to the use of mydriatics or cycloplegics in refraction work in patients beyond 45 years?

2. If they are used frequently, what advantages and what disadvantages or dangers, if any, do you find in such use?

3. If they are used infrequently or not at all is their omission due to disbelief in their utility or to fear of bad effect?

4. Is the belief in these advantages and disadvantages theoretical or the result of your own experience?

5. Can you cite cases in your own practice in which glaucoma has seemed to be caused or aggravated by the use of these drugs?

Ninety of the 100 to whom letters were sent replied. These replies are classified as well as may be according to the answers to the first question. Three classes are made: First, those who do not use them at all; second, those who use them rarely, and third, those who use them frequently. From the answers received a strict classification under these heads is impossible, for it is doubtful if a few of those put down as never using them do not on rare occasions employ them, and some of those noted as rarely using them may actually use them oftener than some of those who are noted as frequent users.

Classified in this way it is found that of the 90 replying 22 never use cycloplegics or mydriatics for refraction work after the age of 45, 32 use them rarely and 36 use them frequently. Of the first, 2 have used them repeatedly for experiment and have discontinued such use because they find they secure equally good results without them. Of the latter, 17 use them in a majority of cases at first examination. Where it is possible the ideas expressed by the answers are incorporated in the table of replies, but in some cases longer extracts are given below.

There is a very commonly expressed fear of glaucoma resulting from the use of these agents, but 25 state that they have no fear of producing increased tension in any case where there is not already the commencement of the glaucomatous process. Thirty-four have seen glaucoma caused or aggravated in their own practice and 11 have seen such cases in the practice of others, while 41 have seen no such cases. Thirty-six cases of glaucoma either produced or aggravated are mentioned. Some of these are reported most thoroughly and carefully. (The author regrets that the length of this paper will not permit them to be incorporated in full just as reported.)

QUOTATIONS FROM REPLIES RECEIVED.

9. W. R. FRINGER: I should use a cycloplegic in a patient over 45 if I thought it indicated in that particular case, providing there was no indication that the patient was predisposed to glaucoma.

11. H. GRADLE: I know of no justification for the use of a cycloplegic for the determination of refraction after the fortieth year of life, and consider it improper. Whenever I use a mydriatic to permit ophthalmoscopic examination of elderly people on account of narrow pupil I usually follow it by eserin until the pupil is normal, except when the eye is distinctly a soft one.

12. F. E. HOLT: It seems to me that oculists should advocate the use of mydriatics for the treatment of the eyes, to give rest, quiet spasms and reduce inflammation, not for refraction work, for the state of refraction can be obtained without mydriatics.

By mistake of a nurse I once had a solution of scopolamin (1/5 per cent.) put into the eyes of a person suffering from a subacute attack of glaucoma, but it seemed to do no harm, and the patient made a good recovery. In cases of a mixed character, when iritis and glaucoma exist together, I have sometimes thought that mydriatics made the eye worse, but I do not recall a case of glaucoma as due to the use of mydriatics alone.

16. J. M. RAY: I have time and again used the drops and have found that I can measure the refraction and give my patients satisfaction without putting them to the inconvenience and annoyance that drops entail. In fact, I find that the more experience I have in refraction work the less inclined I am to use a mydriatic; rarely do I find it necessary in a patient over 40. Careful testing, ophthalmometric measurements, shadow test and ophthalmoscope, followed by a second examination with trial lenses, have proven in my experience all that is necessary except in young people.

21. CASEY WOOD: I do not use cycloplegics for determining the refraction in persons over 45 years of age, because I have repeatedly found exactly the same results with the methods I employ (ophthalmometer, skiascopy with euphthalmin and cocain and test lenses) as with the strongest cycloplegics.

TABLE OF ANSWERS.

	First Question.	Second Question.	Third Question.	Fourth Question.	Fifth Question.
1. A. N. Alling.	"Almost without exception they are *unwarranted* and *unnecessary.*"	.....	"Principally former."	.....	"No, because I am careful."
2. W. C. Bane.	Not used.	.....	"Not used because I have not felt the need."	.....	"None when used in refraction work."
3. Chas. H. Beard.	"I omit them absolutely."	.....	"To both."	"The result of my experience."	A case of hemorrhagic glaucoma.
4. D. C. Bryant.	"Do not use any mydriatics in patients beyond 45."	.....	"Consider them useless except in the rarest of rare cases."	"Result of experience."	"Yes; have seen several cases greatly aggravated. Atropin not used by me."
5. W. L. Dayton.	Never cycloplegic, sometimes mydriatic.	Have not feared bad results.	Both.	Theory only.	Had cases where atropin used for disease increased tension.
6. A. J. Erwin.	Not used after age of 30.	No danger.	"Not used with adults because useless, there being no latent condition that will bear correction."	Observation.	None in my own practice; several cases caused by others.
7. Geo. F. Fiske.	"Seldom use them."	.....	"Disbelief in their necessity."	Both.	No.
8. Harry Friedenwald.	"Rarely, if ever."	.....	"To both." Risk greater than advantage.	.....	Caused, no.
9. W. R. Fringer.	"Never used."	.....	"Not thought them indicated."	Theoretical.	No.
10. E. J. Gardiner.	Very seldom; do not recall single case.	"Think them superfluous."	Both.	Theoretical.	No.
11. H. Gradle.	"I know of no justification for the use of a cycloplegic."	.....	"A skilful observer does not require them."	.....	No.
12. E. E. Holt.	"Never use them for refraction work."	.....	Had one case of paralysis of acc. following 1 per cent. atropin solution.	Theoretical.	No. In one case of glaucoma atropin used by mistake without bad effect.
13. Lucien Howe.	"Not ordinarily."	.....	"Fear of bad effects."	Both.	Apparently one instance.
14. L. J. Leutenbach.	"Do not use them."	.....	"Mainly the latter."	Experience.	Four cases observed.
15. W. T. Montgomery.	Cycloplegic not used in ten years.	.....	Both.	Experience.	Several of both.
16. J. M. Ray.	Never use them.	.....	Disbelief in utility, not fear of bad effects.	Experience.	
17. Dunbar Roy.	Never found them necessary after 45.	.....	.....	Experience.	No.
18. Miles Standish.	"As a rule, I do not use them."	.....	"Fear of harm."	"Experience."	"I can."
19. K. K. Whelock.	Not used. Prefer to change lenses several times if necessary.	.....	Both.	Both.	Have known of two cases after use of cocain.
20. Chas. H. Williams.	"I do not use them."	.....	"Disbelief in their utility."	"Experience."	"No."
21. Casey A. Wood.	Mydriatics often. Cycloplegics rarely or never.	.....	Disbelief in their utility only.	Experience and experiments.	Several cases where glaucoma was aggravated and others where it followed use of atropin.
22. H. V. Würdemann.	No cycloplegics; occasionally mydriatics.	.....	Both; unnecessary and dangerous.	Experience.	Yes; both. (One case reported in detail.)

Twenty-two do not use cycloplegics in refraction work after the age of 45.

23. Frank Allport.	"Never use unless imperative."	.....	Fear bad results.	Theoretical.	No.
24. S. C. Ayres.	Occasionally.	Not required frequently. Used very cautiously.	.....	Experience.	Not in refraction work. In some other cases.
25. A. Barkan.	Rarely.	.....	Rarely required.	Experience.	No.
26. A. E. Bulson, Jr.	"I rarely use them."	.....	Both. Fear glaucoma.	"Partly both."	One case.
27. Swan M. Burnett.	"Only in exceptional cases."	.....	Disbelief in utility.	Both.	Only in one or two operative cases.
28. Fleming Carrow.	Only in strong presumption of astigmatism.	.....	"Not to fear of bad effects."	Experience.	One undoubted case.
29. J. W. Chamberlin.	"Seldom use them."	.....	"Do not believe in the general necessity."	Both.	"I can not."
30. Wm. Cheatham.	"*Very* rarely."	.....	Both.	"Mainly theoretical."	"Several in younger persons."
31. J. E. Colburn.	I use them in low astigmatism.	Greater accuracy.	Disbelief in general utility.	Experience.	No.
32. Leartus Connor.	Rarely used.	.....	Disbelief in utility.	Experience.	No.
33. E. C. Ellett.	Occasionally essential in oblique as.	.....	Both.	Disadvantages theoretical. Advantages experience.	No.
34. Albert B. Hale.	Rarely (?).	.....	Fear of bad effects.	Theoretical.	One case of chronic glaucoma had pain increased.
35. George N. Harlan.	"Homatropin occasionally."	.....	"Both."	"Both."	One case.
36. F. C. Hotz.	"Very rarely."	.....	"Regular use is not of advantage."	"Found useful in few cases."	No.
37. A. E. Kegley.	Rarely.	.....	"Both."	"Experience."	Four cases after use of atropin.
38. Herman Knapp.	Rarely use cycloplegics; mydriatics frequently.	.....	Both.	Experience.	Yes; both.
39. Chas. W. Kollock.	"I rarely use them, but do not hesitate when they are indicated.	.....	Both.	Experience.	No.
40. J. A. Lippincott.	"Quite infrequently."	.....	Both.	Experience.	Yes; several cases of increased tension.
41. J. O. McReynolds.	Cycloplegia seldom. Mydriasis frequently.	.....	The former.	Experience.	Increased tension in many cases.
42. W. A. Mann.	Mydriatic frequently; cycloplegic occasionally.	Advantage in retinoscopy and in estimating astigmatism.	.....	Advantages practical; disadvantages theoretical.	No.
43. H. Moulton.	In exceptional cases.	.....	Both.	Experience.	No.
44. Charles A. Oliver.	Seldom or never in refraction.	Advantageous in a few cases.	Disbelief in utility. No disadvantages.	Experience alone.	Not in my own practice.

	First Question.	Second and Third Questions.	Fourth Question.	Fifth Question.
45. Edward Oliver.	Rarely.	Fear of bad effects.	Experience.	Three cases.

	First Question.	Second and Third Questions.		Fourth Question.	Fifth Question.
43. H. Moulton.	In exceptional cases.	Advantageous in a few cases.	Both.	Advantages practical; disadvantages theoretical.	No.
44. Charles A. Oliver.	Seldom or never in refraction.	Advantageous in a few cases.	Disbelief in utility. No disadvantages.	Experience. Experience alone.	No. Not in my own practice.
45. Caspar Fischel.	Exceptionally.	.....	Fear of bad effects.	Experience.	Three cases.
46. A. E. Prince.	Exceedingly useful in a few cases.	.....	Fear of consequences.	Experience.	Three cases.
47. B. Alex. Randall.	Rarely in refraction. Frequently otherwise.	"No real disadvantages."	"Principally first."	"Largely theoretical."	No.
48. G. E. de Schweinitz.	Rarely find a cycloplegic necessary.	Common disadvantages of mydriasis. Do not fear bad effects.	.....	Experiences.	"Yes; three." Cases cited.
49. Louis H. Taylor.	Used when necessary.	More certain of results.	Largely fear of bad effects.	Theoretical.	No. Use atropin frequently without harm.
50. J. Thorington.	Seldom.	A cycloplegic is used to put the eye at rest or decide axis of as.	.....	Experience.	"One case only."
51. Flavel B. Tiffany.	Not as often as in younger people.	.....	No fear of bad effects.	Experience of 25 years.	No.
52. Frank C. Todd.	A few select cases under 50.	.....	Both.	Experience.	No. Have seen a number of cases.
53. J. A. White.	Rarely.	"No special advantages."	Small risk of increasing tension.	"Experience."	No.
54. Hiram Woods, Jr.	Occasionally to make H. or H. as. manifest.	.....	Former mainly.	Both.	Caused, no. Aggravated, one case certainly, possibly two others.

Thirty-two use cycloplegics *rarely* in refraction work after the age of 45.

55. A. R. Baker.	Cautiously. More frequently than formerly.	2. Of great value in refraction. 3. Fear of bad effects.	Largely theoretical.	No cases of my own; several others.
56. J. P. Davidson.	Frequently.	2. Advantages, proper correction of refractive error. Disadvantages, none.	Experience.	Several cases, not in marked degree.
57. Edw'd J. Bernstein.	Frequently to uncover ametropia.	2. Advantages same as in young. 3. No fear of bad effects.	Experience.	No.
58. Randolph Brunson.	One or other in about 75 per cent. cases.	2. Uncovers masked H. and H. As. 3. Experience taught me production of glaucoma purely a myth.	.....	No.
59. J. Edgar Dean.	About 30 per cent. after 45, instead of 70 per cent. as before.	2. Advantage, greater accuracy. 3. Not so frequently necessary as age advances.	Experience.	No. Perhaps 8 or 10 cases in others.
60. H. Bert Ellis.	If lens tests show discrepancies.	2. Probably cycloplegic in 50 per cent. of cases with no bad results.	Experience.	No. Have not used in glaucoma.
61. C. R. Elwood.	If objective and subjective tests disagree.	2. No disadvantage. Better results in H. and H. As.	Both.	One case.
62. Harold Gifford.	Answer indefinite.	2. Advantages. It gives a fixed point to start from.	.....	One case.
63. George M. Gould.	Just as necessary as earlier.	2. No danger in healthy people and healthy eyes. Advantages same as in the young.	Experience.	No.
64. H. F. Hansell.	When there appears to be latent H. or H. As.	2. No danger. 3. Necessity seldom.	Experience.	No.
65. Clark W. Hawley.	Whenever thought necessary.	2. Have uncovered errors that were uncertain before.	Experience.	No. Have seen one case.
66. J. F. Herbert.	No age limit.	.....	Experience.	Aggravated in a single case.
67. Alvin A. Hubbell.	Many cases up to 50 years old.	2. No danger except in incipient glaucoma. Advantages same as in the young.	Experience.	No.
68. Edward Jackson.	Cycloplegic in a minority of cases.	2. Same as in younger patients. No danger if glaucoma excluded.	Experience.	But one case.
69. George F. Keiper.	"Always use homatropin (1 per cent. sol.)."	2. Advantage a widely dilated pupil, no danger if followed by eserin.	Experience.	No.
70. H. C. May.	Homatropin and cocain in about 10 per cent. of cases.	2. More accurate correction of As. and H. especially in the nervous.	Experience.	No.
71. Ellis Phillips.	In nearly all cases under 50 years.	2. Can do much more reliable work. Almost no disadvantages.	Experience.	One case.
72. Wm. C. Posey.	Invariably use homatropin when As. suspected.	2. More accurate correction. 3. No bad effect.	Experience.	No.
73. Walter L. Pyle.	In all new patients with active accommodation.	2. Advantages suspension of accommodation; no danger from age.	Experience.	No.
74. R. L. Randolph.	Generally use cycloplegics beyond 45; not influenced by age.	2. Have found no dangers. Omitted when two consecutive examinations agree.	Experience.	No.
75. Wendell Reber.	Used as readily between 45 and 50 as before.	2. Advantage both total amount and axis of As. are more certain.	Experience.	Personal knowledge of but one case.
76. H. O. Reik.	Homatropin used with majority.	2. Great service in securing accurate results; no bad effects.	Experience.	No.
77. Dudley S. Reynolds.	Homatropin used when V. is below 6/VI and in astigmatism.	2. Have seen no bad effects from homatropin.	Experience.	Homatropin, no. Atropin, yes.
78. G. Oram Ring.	Very frequently.	2. Necessary in certain cases.	Experience.	One case (accidental).
79. S. D. Risley.	Frequently.	2. Necessary for accurate work.	Extended experience.	No; many cases in others' practice.
80. S. O. Richey.	Frequently.	2. Necessary for accurate work.	Experience.	No.
81. G. C. Savage.	Frequently.	2. No danger in proper cases.	Experience.	No.
82. Wm. M. Sweet.	All cases where spasm of acc. suspected.	3. No fear in proper cases.	Experience.	No.
83. J. L. Thompson.	Always at first examination.	2. Necessary.	Careful observation in at least 20,000 cases.	One case.
84. C. A. Vesey.	Always in As. and H.	2. Necessary for accurate correction.	Experience.	No.
85. J. E. Weeks.	Used in first examinations.	2. Required for careful examination.	Experience.	Cocain seemed to excite attack in one case.
86. Cassius D. Westcott.	Cycloplegia at all ages.	2. More accurate refraction. 3. Exclude glaucoma.	Experience.	No.
87. W. H. Wilder.	No hesitation in asthenopia and astigmatism.	2. In ophthalmoscopic examination and relief of spasm.	Both.	One case, quickly relieved by eserin.
88. H. B. Young.	May be 5 per cent. of cases. Either homatropin or scopolamin.	2. Same advantages as in younger people.	Both. I use caution.	Not in refraction work. One case after extraction. Relieved in 12 hours by eserin.
89. C. F. Clark.	Acc. often active and cycloplegic used without hesitation.	2. Same advantages as in younger patients. No disadvantages if glaucoma excluded.	Experience.	Glaucoma excited in a few not refractive cases.
90. W. T. Southard.	Homatropin frequently; atropin never.	2. Necessary to correct examination. No disadvantages if used carefully.	Experience.	No. I carefully exclude glaucoma.

Thirty-six use cycloplegics frequently in refraction work after the age of 45.

22. H. V. WÜRDEMANN: Both unnecessary, as the accommodation powers are weak and latent, hyperopia has become manifest and fear of bad effects.

24. S. C. AYRES: I occasionally use cycloplegics in persons beyond 45 years of age. I do not hesitate to use them when the asthenopic symptoms are distressing and where former glasses have not been satisfactory.

27. SWAN M. BURNETT: I do not use them at that age, because the accommodation has ceased to be a disturbing factor, and a wide pupil brings disadvantages of its own.

32. LEARTUS CONNOR: I used mydriatics in my early practice frequently until convinced that no good came from them, as a rule. In some cases in which hardening of the lens had been long delayed mydriatics had the same value as at a much earlier age. However, my practice is based on my experience.

33. E. C. ELLETT: In cases with asthenopia and small errors, .50D. or less with astigmatism, especially oblique astigmatisms, I find most help from mydriatics in people over 45. I fear a bad result (i. e., glaucoma); hence I make unusual effort, by repeated tests, to avoid using them. Their utility is unquestionable, but still they are rarely absolutely necessary in these cases.

34. A. B. HALE: I use euphthalmin very often at all ages. Scopolamin I also use when I can not get good refractive results, atropin only when the iris is suspected of inflammatory involvement.

37. A. E. KEGLEY: I rarely use them, giving the patient the full manifest correction, and at this age with their assistance, the latent trouble with accommodation soon shows, and then I continue to change lenses until the patient is comfortable.

41. JNO. MCREYNOLDS: If a diseased condition indicates a cycloplegic I use it at any age, and after the extraction of glaucomatous cataracts I have used atropia very frequently with the result of good reading vision, and the same is true in some cases of iridectomy for glaucoma in which an iritis called for rest of the iris and ciliary body.

44. C. A. OLIVER: Advantages very rare. In a few cases of pathologic spastic condition of the ciliary muscle, which later have given way to paresis, either normal from senile changes or abnormal from degenerative processes. No disadvantages, as I make it an unalterable rule to thoroughly study every case of ophthalmic disease presented to me.

54. HIRAM WOODS: Occasionally I find it necessary to make H. or H. A.'s (diagnosed objectively) "manifest." Such cases usually have P. over-corrected by examining optician and static error unnoticed. I do not hesitate to use a cycloplegic if indications are present which would make me use it on a young person.

57. EDWARD J. BERNSTEIN: I frequently find uncorrected ametropia or badly corrected ametropia, just as one finds them in younger persons. Often with this added, that they are borne with resignation as a part of the inevitable while younger persons would complain. Then, of course, with a dilated pupil more peripherally placed lesions are often brought out.

59. EDGAR DEAN: I certainly do not draw the line at 45 years at all, nor even make an inflexible line at 60 years, for my records show their use at 62, 63, and in one case at 70 years.

66. J. F. HERBERT: Personally, I think the age limit for the use of mydriatics and cycloplegics is a "bug-a-boo," a "myth." I never hestitate after I have made an ophthalmoscopic examination and find no contraindication, to use either up to any period of life. When I find a patient at 50 years or over with active accommodation I always use a cycloplegic.

67. A. A. HUBBELL: I have used cycloplegics (mostly) homatropin) for 22 years in a large practice, and I have never induced or aggravated a case of glaucoma by them. I have even used homatropin in known incipient glaucoma without aggravating it. In these cases I usually supplement with a myotic.

70. C. H. MAY: I am careful to test the tension and to examine the fundus before using the cycloplegic (hom. and co. combined). I have never seen a case of glaucoma result from such instillations, either in my own practice or in that of others.

72. WM. C. POSEY: I have used homatropin in this way in thousands of cases and have never had a bad effect following the use of the drug. I have never seen glaucomatous symptoms provoked by it. Of course, I always take the precaution of making careful ophthalmoscopic examination of cases prior to the instillation of any drug and where there is glaucomatous excavation or the suspicion of one, a mydriatic is never used.

75. WENDELL REBER: If there is any low-grade cylindric error the ciliary muscle is making the fight of its life between 45 and 50, especially in sound, healthy subjects, and non-mydriatic prescriptions must be based on frequently repeated examinations or the surgeon will be often led into error. Even with repeated measurements it is often impossible to assure one's self exactly what the refractive status is. If there is high-grade astigmatism the patient will in all probability have been carefully refracted under cycloplegia before presbyopia sets in and the ciliary muscles have been taught correct habits. It is in the presence of astigmatism of 0.75D. or less that the ciliary muscle can lead the most painstaking examiner astray when measuring incipient presbyopes, and particularly is this the case in moderate exophoria. Therefore, unless the previous ophthalmoscopic study contrainterdicts cycloplegia, I never hesitate to use homatropin with cocain any time between 45 and 50, or scopolamin with cocain in the proportion of ⅛ of a grain of the former to the ounce of water. Any latent glaucomic tendency that may be lit up by these weak solutions is easily controlled; and what is of more consequence, it will bring to early notice and treatment occasional cases of glaucoma that would otherwise progress to a much more dangerous degree before being recognized, as pointed out by Jackson three or four years ago.

77. DUDLEY S. REYNOLDS: Cycloplegics are frequently necessary in persons above 50 years of age. Considerable accommodation exists in the eyes of robust astigmatics of 60.

79. S. D. RISLEY: I have never seen a case of glaucoma in my own hands caused by mydriatics. I have seen cases of glaucoma following a mydriatic, but a careful study has in every case justified the belief that the eye was on the verge of an attack before its use, and that the mydriatic should not have been used primarily. I believe that the mydriatics should not be used in suspicious eyes at any age.

80. S. O. RICHEY: The practice is to wholly correct the static refraction in those above as well as those below 45 years of age.

83. J. L. THOMPSON: Many persons over 45 years of age have considerable power of accommodation, I therefore always use cycloplegics in my first examinations. Indeed, this is my practice until after their 50th year: scopolamin, when under 46; homatropin, if over that age.

84. C. A. VESEY: The advantages are that a latent astigmatism may thus be worked out so that a proper correction of the refractive error may be given, thus making the patient far more comfortable than if no correction of the astigmatism was made. In cases of high hypermetropia in which the amount of hypermetropia does not manifest itself by the ordinary use of the test lenses, the degree of hypermetropia may be ascertained, the difference in amount between the two eyes noted, so that we have a much better knowledge of the optical conditions of the eye to form a basis for the more intelligent prescription of glasses. Thus Mrs. L., aged 48, had been using +S.2.50 D. in each eye for several years, giving a vision of 6/6—. No other glasses were employed. Additional spherical or cylindrical lenses blurred the vision. Refraction under homatropin gave the following result: O. D.+S.5.00 D.⌒1.00 D.C.ax.95 deg.V. =6/5; O.S.+S.5.50D.⌒+1.00 D.C.ax.85 deg.V.=6/5. A reduction of +S.50 D was made in each eye, and the patient has been wearing the glasses with perfect comfort. In this case a large amount of latent hypermetropia, as well as the astigmatic error, did not become manifest until after the use of homatropin.

87. W. H. WILDER: There is the great advantage that the refractive media and the fundus can be carefully examined.

Retinoscopy can be practiced more satisfactorily. I have found some patients over 45 years of age who could partially conceal astigmatism, because of spasm, who were relieved by the correction of the defect. This is particularly noticeable in nervous individuals.

QUOTATIONS CONCERNING GLAUCOMA.

3. C. H. BEARD: A case of hemorrhagic glaucoma once occurred in my practice which I greatly fear was due to the use of atropin. I consider the indiscriminate employment of mydriatics in elderly persons, especially with those of degenerate vascular systems, as most pernicious. In the fitting of glasses, I rarely prescribe a cycloplegic for an individual past 35.

19. K. K. WHEELOCK: Have known glaucoma to be precipitated in two cases by the mydriatic effect of cocain. Have had two cases and in others such diminution of vision, temporarily, as led me to think disturbances in intraocular circulation must be the cause.

21. CASEY WOOD: I have seen two or three cases in which glaucoma followed the use of both cycloplegics and mydriatics, but as the ordinary forms of this disease show themselves in attacks I see no reason why these remedies should be blamed for a disease that would appear in any event. What proof have I, in the cases referred to, that the glaucomatous attacks would not have appeared in any event? Mydriatics and cycloplegics, say a million times a year, are employed in the United States; would it not be remarkable if glaucoma—a comparatively common affection—did not occasionally arise after their employment? If one were to accept this *post hoc propter hoc* reasoning, one could equally show that glaucoma is brought on by taking Epsom salts or riding on the elevated trains. That both classes of drugs raise the tension perceptibly in about 10 per cent. of all cases of eye diseases where there is congestion of the uveal tract (and in some normal eyes), and that the proportion is greater (to an extent unknown to me) in persons over 45 years of age than in those under 25, is, in my experience, true, and that in persons prone to attacks of glaucoma mydriatics very occasionally precipitate an impending attack, I believe, but this disadvantage can usually be eliminated by noting the history of the case and in making the usual preliminary examination of the eye before using the cycloplegic or mydriatic.

22. H. V. WÜRDEMANN: Cases of so-called simple glaucoma where, for diagnostic purposes, I have used atropin to develop further intraocular tension. Marked cases in which atropin has been used by unskilled practitioners where acute inflammatory glaucoma has ensued on use of atropin instillation for purposes of measuring the refraction.

26. A. E. BULSON: I think I was instrumental in producing glaucoma in a previously sound eye and normal tension by the use of atropin. Since then I have used atropin in patients over 40 to 45 with extreme caution.

28. FLEMING CARROW: I have the records of one positive and undoubted case of glaucoma, being produced by the continued use (one month) of atropia sulphate for purposes of refraction.

30. WM. CHEATHAM: I can not cite a case of a person that age or over. I have seen it in younger patients several times. I saw it in one case in which atropia was given internally in a large dose in a woman 55 years old.

34. ALBERT B. HALE: One case, a woman of 60, suffering from chronic glaucoma, had the pain temporarily increased by euphthalmin.

35. GEORGE N. HARLAN: Have seen an attack of violent glaucoma directly induced by instillation of atropia and retinal pulse induced by use of homatropin.

37. A. E. KEGLEY: I have had four cases where glaucoma followed the use of atropin in patients above 45 years old. Three speedily recovered, and one still has chronic glaucoma in a light form.

38. H. KNAPP: Both, in three cases even by euphthalmin; in all cases the attack was, however, promptly cut short by instillation of 1 per cent. solution of eserin.

45. CASPER FISCHEL: I remember distinctly three cases in which simple glaucoma was detected by the use of homatropin and cocain.

46. A. E. PRINCE: I have had three cases where I recognized a mydriatic as the exciting cause of glaucoma.

48. GEO. E. DE SCHWEINITZ: A woman past fifty, with chronic nervous disease, probably some irregular form of ataxia; one drop of a 1 per cent. solution of atropin instilled for ophthalmoscopic purposes by the resident physician; sharp glaucomatous attack followed a few hours later, controlled with eserin. 2. A Jewish woman, aged 36, homatropin instilled for the purpose of determining refractive error by a colleague; typical acute glaucoma a few hours later; treatment eserin, salicylate of sodium and paracentesis cornea, the patient refusing to permit iridectomy. Three weeks later I saw the patient, typical glaucoma resembling the chronic congestive type; patient declined operation. Subsequent history unknown. 3. Acute glaucoma in a woman aged 35, brought on by the instillation of a mydriatic, whether atropin or some other mydriatic unknown, for the relief of an acute inflammation of the eye occurring during grippe; patient seen one week later with typical acute glaucoma, promptly relieved by iridectomy. There is some doubt whether the primary inflammation was an attack of glaucoma aggravated by atropin, or whether it was an ordinary conjunctivitis, and the attack of glaucoma induced by the instillation of atropin. I did not see the patient until a week after the increased intraocular tension began. Both cases evidently were predisposed to glaucoma, and this I believe to be the history of all cases of glaucoma which are produced under the influence of mydriatics. I have a number of times seen what seemed to me to be temporary rise of tension after the instillation of mydriatics in elderly people, but never enough to amount to a glaucomatous attack, and always controlled by eserin.

61. C. R. ELWOOD: I have had one case in which atropin undoubtedly aggravated if not caused an attack of glaucoma. Mrs. B., aged 23: Ten days previous to my first visit patient complained of severe shooting pains through temples, and had called a general practitioner, who on finding the eyes much inflamed prescribed atropin and hot boric acid compresses. At the time of my visit vision in the right eye was limited to form perception and in the left 20/80 minus, tension increased and the asthenopic symptoms were so pronounced that the field of the left eye was unreliable. A continuance of the hot boric acid compresses and internally the administration of liberal doses of the iodids and salicylates, with instillations of eserin and night pilocarpin sweats relieved the symptoms and restored vision in what was to me a gratifyingly short time of four days. There was no evidence of iritis, and the result of medication led me to make a diagnosis of acute glaucoma.

65. C. W. HAWLEY: I saw one case in which homatropin and cocain were instilled and within one hour double acute glaucoma was produced in a man of 46 years of age. No relief followed the use of eserin, and on the third day a double iridectomy was performed with complete relief. I hardly would say that homatropin and cocain in this case were the direct cause of the symptoms, simply being an acute attack of a condition already present.

68. EDWARD JACKSON: I have seen but one case in which a glaucomatous exacerbation was produced by a mydriatic. This was in a woman aged 25 years. I precede the use of a mydriatic or cycloplegic in all cases by an ophthalmoscopic examination and a consideration of the probability of glaucoma.

70. C. H. MAY: As a rule I do not use a cycloplegic in patients beyond 45; in nervous individuals, especially women, I employ homatropin 2 per cent. combined with cocain 1 per cent. I do this also if the first glasses prescribed do not give satisfaction. This applies to patients 45 to 50. In such cases I use a cycloplegic, probably in 10 per cent. of cases. After the age of 50 I rarely use it.

In about 10 per cent. of cases between 45 and 50 described above the use of cycloplegics leads to more accurate and better correction both of astigmatism and latent Hy. (for latent Hy. does exist in quite a number of instances, notwithstanding the many views to the contrary.)

71. ELLIS PHILLIPS: I had one case, a woman about 45 years of age, whom I asked to put a solution of atropia, gr. ii

to ℥i in her eyes three times a day for two days; she put it in twice and then sent for me to call, complaining of marked pains in the head and eyes and colored light about the lamps I had no ophthalmoscope with me, and was not sure of increased tension. I prescribed eserin solution, and in a few days she was all right. This was the only case that gave me anxiety.

75. WENDELL REBER: I have personal knowledge of but one case of true glaucoma induced by the use of homatropin after 45 and in that case (a hospital one), I believe closer ophthalmoscopic study would have prohibited the use of the mydriatic.

83. J. L. THOMPSON: I can recall but one person in whom the glaucomatous process was temporarily set up after the use of a mydriatic. This occurred in a young married woman aged 42. It subsided in a few days after the application of a weak solution of eserin.

Doubtless the reason why I have not met with more cases is because I take great pains in examining the tension of all persons nearing 42 years of age before using cycloplegics. If there is the least suspicion of tension, or if the patient mentions any idiosyncrasy concerning the former use of any of the mydriatics, I then examine as best I can by other means.

CONCLUSIONS.

No age can be arbitrarily fixed beyond which cycloplegics must not be used, and while they are as necessary in certain cases after 45 as they are before, they are required in fewer and fewer cases as life advances. But since there is more danger of glaucoma in the elderly, and as mydriatics tend to increase intraocular tension, these drugs should be used with caution after the age of 40, and in certain cases should not be used at all.

BIBLIOGRAPHY.

1. Fuchs: Text-Book of Ophthalmology. N. Y., 1899.
2. Clarke, E.: The Use and Abuse of Mydriatics, Clin. Jour., London, 1898-9, xiii, 81-85.
3. Swanzy: Diseases of the Eye. Phila., 1900.
4. May, Chas. H.: Diseases of the Eye. N. Y., 1901.
5. Nettleship: Diseases of the Eye. Revised and Edited by W. H. Spicer, Phila. and N. Y., 1897.
6. Watson, D. C.: Practical Handbook of Diseases of Eye. N. Y. P. 897.
7, 8, 9. Norris and Oliver: System of Diseases of the Eye. Phila., 1897-1900.
10. Jackson, E.: How to Use Mydriatics. Also article in de Schweinitz and Randall's American Text-Book of Diseases of Nose and Throat.
11. Terrier: Quand et comment faut il employes l'atropine en Oculiste? Rev. gen. et Clin. et de Therap. Par., 1897, xi, 611.
12. Peltier, F. L.: Des Accidents atropiniques dans le traitement des maladies des yeux. Rec. d'ophth., Par., 1890, 3 s., xii, 642.
13. Kalb: De l'abus de l'atropine en therapeutique oculaire. Rev. Med. d. soc. savantes. Par., 1894, xii, 228-223.
14. Satterlee: Abuse and Use of Atropine in Eye Treatment. Buffalo Medical Journal, 1896-7, xxv, 149.
15. Grimsdale, H.: Glaucoma Following Atropine, Med. Times and Hosp. Gaz. London, 1900, xxviii, 291.
16. Knapp: A Case of Glaucomatous Attack Following Instillation of Euphthalmin. Arch. f. Ophth., N. Y., 1900, xxix, 313.
17. Hull: A Case of Glaucoma, the Result of Injudicious Use of Atropine. Atlanta M. and S. J., 1885-6, N. S., 11, 34.
18. Brown, E. J.: A Case of Glaucoma Following Use of Atropia. Ophth. Rec., Chicago, 1897, vi, ii.
19. Coggin, D. D.: Glaucoma Produced by Atropia. Am. J. Ophth., St. Louis, 1885, ii, 8.
20. Cant, W. J.: Acute Glaucoma Induced by Atropine After Iridectomy. Ophth. Rev., Lond., 1884, iii, 265.
21. Hinshelwood, J.: Acute Glaucoma After Use of Cocain, with Remarks on Use of Holocaine in Glaucoma. Ophth. Rev., Lond., 1900, xix, 305.
22. Dyer: On the Use of Atropia in Diseases of the Eye. Tr. M. Soc. Penn., Phila., 1882, xiv, 253.
23. Robertson, J. W.: Northwest Lancet. St. Paul, 1893, xiii, 341.

DISCUSSION.

DR. HERMAN KNAPP, New York—I have used cycloplegics in strong solution after operations for glaucoma, for the reason that in a number of cases you find a day or two after the operation that there are a number of fine, filiform adhesions, which in all probability are the result of blood or some irritating substance. I find that atropin dropped into the eye on the first day after the operation, while the eye is still soft, does not increase the tension. I have never in this practice, which is not new with me, seen any unpleasant result.

As to the production of glaucoma by atropin, homatropin and euphthalmin I have seen it repeatedly, in every one of them, frequently with atropin, less so with homatropin, and rarely with euphthalmin, viz., in three well-developed cases, increased tension, to plus 2, steamy cornea, and dilatation of the pupil, all the symptoms of a glaucomatous attack. Those attacks have not induced me to abandon euphthalmin, for they are easily cured with eserin; not so well with pilocarpin. One case of euphthalmin in which the remedy had been used for 6 months had developed well-marked atropin granulations. This suggested the idea to me that euphthalmin was in all respects a weak atropin, but using it in a patient with marked idiosyncrasy against atropin, it failed to produce erythema or any other irritation.

DR. JOHN E. WEEKS, New York—I think there is a general impression that a mydriatic should not be used in glaucoma, even after the operation of iridectomy. In my association with Dr. Knapp I think it was very seldom that a mydriatic was used after an operation of this kind, but I found that the late Dr. Noyes made it a routine practice to use atropin immediately after iridectomy for glaucoma and continued it for two or three days, or until the wound was well closed. I think many of us have observed the adhesions Dr. Knapp has spoken of in the healing of the eye after iridectomy for glaucoma. I have used atropin in this way and have not regretted it; however, if there is no evidence of any irritation of the iris I would not use it after the first instillation.

In regard to the question of glaucoma being produced by mydriatics, I have observed one case after the use of cocain; at least the attack of glaucoma came on a very short time after its use, a half hour I think. There was a previous glaucomatous tendency. Cocain was employed in order to permit of a better view of the interior of the eye. I do not think the attack would have come on if the cocain had not been used.

DR. S. D. RISLEY, Philadelphia—It has not been my habit to use a mydriatic after iridectomy for glaucoma, and it seems to me that it might not always be free from danger. I recall one instance where atropia was instilled by mistake in one of my cases of glaucoma at the Wills Hospital. Relief had followed the iridectomy and all was going smoothly until the third day, when I found a return of pain and increase of tension. The nurse then told me that atropia had been used by mistake. It is true the anterior chamber had been restored. Dr. Knapp, I understand, used it before the healing of the wound.

Regarding the occurrence of the conjunctival trouble alluded to by Dr. Knapp, I have seen the same thing follow the prolonged use of eserin in chronic glaucoma, but it may have been due to micro-organisms in the solution as suggested by Dr. Weeks. There were two instances, however, where the solution of atropia, coming from my own druggist, caused this conjunctival disease, notwithstanding the care habitually used to supply sterile solutions. They are unquestionably, I think, cases of idiosyncrasy to all mydriatic solutions, but I have never seen any evidence of this peculiarity for eserin.

DR. F. W. HIGGINS, Cortland, N. Y.—I expect to hear more about the subjective symptoms following the use of mydriatics in old people. Dr. Starkey's paper refers more particularly to the use of atropin in refraction. It is very unfortunate that for months and even years after the use of a mydriatic patients refer every eye symptom to the instillation of the drug. Of course in children the symptoms fade out in a very short time, and you can brush away their complaints, but in people about middle life, or beyond, these symptoms are not always altogether imaginary. At a time when accommodation is beginning to fail, completely paralyzing it for several days may certainly be productive of untoward symptoms. For this reason I am sure that where it is possible we should examine these patients several times rather than subject them to the use of atropin to finish our diagnosis in one day.

DR. JOHN O. REYNOLDS, Dallas, Texas—Dr. Starkey reported me correctly in saying that I have frequently employed mydriatics in operations for glaucoma and glaucomatous cataract, and I feel that it is a reasonably safe procedure for the first two or three days following the operation, before the wound has closed, but I want to be placed on record as giving a caution as to its use in other kinds of operations that do not involve the opening of the globe. If you have opened the globe there is not so much danger, but I recall several cases presented

to me where glaucoma had developed after using even cocain where an operation was performed that did not open the globe. One patient was brought to me completely blind following an operation under cocain for the removal of a pterygium. So when doing any operation that does not open the eyeball, and after presbyopia has developed, and with use of mydriatics, you should keep the patient under close observation and use a myotic afterward if pupil does not promptly return to normal size.

In the matter of refraction in presbyopes I use mydriatics, not cycloplegics, and keep the patient in my office until I see the pupil go down. I do not want a presbyopic patient who comes from a distance and uses a mydriatic to go away until I feel satisfied that everything is all right.

DR. H. B. YOUNG, Burlington, Iowa—I want to say, in connection with the use of cycloplegics in refraction, in people over 45, that I use them, not very often, perhaps, but occasionally in strong, robust persons, who seem to have an excessive amount of accommodation. I believe these people are not liable to glaucoma, because I understand that failure of accommodative power is one of the prodromals of glaucoma. I have had glaucoma follow two cataract extractions that I believe was due to atropin, in a patient 79, and in another 42 years of age. In the first case I used it because a colleague had operated on the other eye and had failure because of iridocyclitis. Twelve hours later I was called to find the patient with acute glaucoma. Eserin controlled the attack and result was satisfactory. In the second case, a teacher, I operated on the left eye at one vacation time and was unable to remove all the soft cortical matter. A rather mild iritis followed for about two weeks, with final absorption of the cortical matter and a good result. She subsequently came for operation on the other eye, and suspecting from the appearance that I would again meet with some difficulty in dealing with the cortex, I used atropin, which I had not used in the other eye. In five days there was increase of tension and I had to resort to eserin. I was pleased to hear Dr. Knapp make the statement he did as to the use of atropin after iridectomy for glaucoma. If I had had the courage to use it in a recent case some filamentous adhesions to the capsule might have been avoided.

DR J. A. LIPPINCOTT, Pittsburg, Pa.—I may say, however, that in my early practice I was in the habit of using a cycloplegic, atropin, much more frequently in elderly people than I do now. A good many years ago I produced glaucomatous phenomena in two cases both about 50 years of age by the instillation of this drug. Both cases responded promptly to a myotic, and no harm was done; but since that time I am rather cautious about mydriatics for refraction purposes beyond middle life. Still, we occasionally meet with cases even above 50 years of age in which the accommodation must be paralyzed to secure satisfactory results. In such cases, after a careful inspection and palpation of the eyes, I usually begin with a weak solution of homatropin, and watch the effect closely. If no unpleasant phenomena appear I proceed as in a young person.

DR. EDWARD JACKSON, Denver—In reference to Dr. Starkey's conclusion that cycloplegics should be used with caution after 40, I would amend that by striking out "after 40." They should be used with caution always. The only case in which I have seen glaucoma produced by a cycloplegic was in a young woman of 25; and in that case I think there is no doubt that if a more thorough investigation of the history had been made before using the drug a positive diagnosis of glaucoma would have been made.

It is true that patients often have a tendency to ascribe everything that happens in the way of eye symptoms for some time afterward, to the drug that has been used. If a patient has used atropin and then spends ten days or two weeks with nothing to do but think about his symptoms, it is likely that he will refer some of them to the use of the drug. The risk of that, of course, is very much lessened by the use of the brief mydriatics. That is, perhaps, the chief reason why they should be used after 45. But this risk can also be diminished by carefully warning the patient that the symptoms will not pass away after the use of atropin for at least two weeks. They are anxious about the effect until recovery is absolute. Apart from that danger I think there is the same need to use strong cycloplegics in some cases after 45, and even after 50, as in younger patients. In my experience where there is spasm of accommodation it yields more slowly as the patient gets older. There are a number of cases where it is just as necessary to use a cycloplegic after the age of 50 as before.

DR. W. H. BATES, New York—I would like to record the history of a patient in whom atropin produced a very unusual effect. The patient was not 45, but a young girl of 18 Atropin had been used once with no bad effect. Later she was placed a second time under atropin, 2 gr. to the ounce, three times a day for two days and it was then discontinued. The pupil did not contract, but remained dilated six months, when it began to contract. The paralysis of accommodation continued. I saw the patient ten years later and there was still paralysis of accommodation.

DR. STARKEY—With regard to glaucomatous exacerbation being relieved by pilocarpin and eserin, I would say that in the one case I mentioned there was considerable difficulty, though both were used, and for a number of days I could not get the tension down and then it seemed prone to rise again.

In regard to the accommodation being so much weaker after 45, there is a difference of opinion expressed about that in the replies sent in. While some say that after 45 they use weaker or less amounts of cycloplegics and others that they use only homatropin and cocain, two or three say that they have to use stronger cycloplegics and for a longer time in order to get complete relaxation than they do in younger people.

CARCINOMA EPIBULBARE PLANUM.

B. MATYS, M.D.
ASSISTANT TO PROFESSOR DEYL, AT THE BOHEMIAN EYE CLINIC.
PRAGUE, AUSTRIA.

Epibulbar tumors are those which are localized on the margin of the cornea, where it joins the sclera (limbus corneæ), from which they spread over the cornea and conjunctiva, sometimes also in the sclera. They do not include secondary tumors occurring in the ciliary body, choroid or lids. Among the more frequent benign tumors occurring here are dermoid, fibroma and lipoma; the malignant forms being mainly sarcoma and carcinoma. The early diagnosis of these, especially the latter, is of the greatest importance, since by its timely removal the eye may be saved and, according to the testimony of medical literature, without any recurrences. The epibulbar tumor in our case was flat, peculiar in appearance and color, unusual in this respect among the malignant forms, but certainly belonging to the epibulbar tumors. Noyes had met with only three cases in seventy thousand patients. In the out-department of the Bohemian Eye Clinic, Prague, thirteen cases have occurred out of a total of eighty thousand patients during the last ten years, and Professor Deyl, now at the head of the ophthalmological clinic, affirms that he saw no such conjunctival tumor during his experience as assistant and in his polyclinic practice of fifteen years nor in his private practice, during which time he has observed or treated more than one hundred thousand cases.

NARRATION OF CASE.

Our case was V. J., 78 years old, miller by occupation, resident of Borosin, Bohemia, who was received into the Bohemian division in May, 1902.

Previous History.—He states that he had not been ill during the past fifty years, but before that time he had had gonitis rheumatica, but never any eye illness. His vision had always been better for near than for distant

work. One and one-half years ago the left eye became inflamed and some lachrymation was noticed, and he had such pains from 11 to 3 o'clock at night that it was impossible for him to sleep during these hours. Six weeks after the first appearance of these pains he noticed that his eyesight was failing, and two months later (just at Christmas) his daughter told him that he had a white spot on his eye. From this time on he had no rest. The eye became more reddened, his vision continued to fail and the white spot increased in size. The patient was unable to say where the white spot first appeared. During the day he had no pain, but at night regularly from 11 o'clock to 3 the pains were so severe that he could not sleep. Besides this he was troubled more with lachrymation. He consulted no physician, but was satisfied with remedies his neighbors suggested.

Condition on Entrance.—Patient in good health aside from hypertrophic prostatitis and his eye disorder. The right eye, aside from chronic catarrhal conjunctivitis and myopia modica, is normal. In the left eye the lids were normal, the conjunctiva of the lids a little inflamed

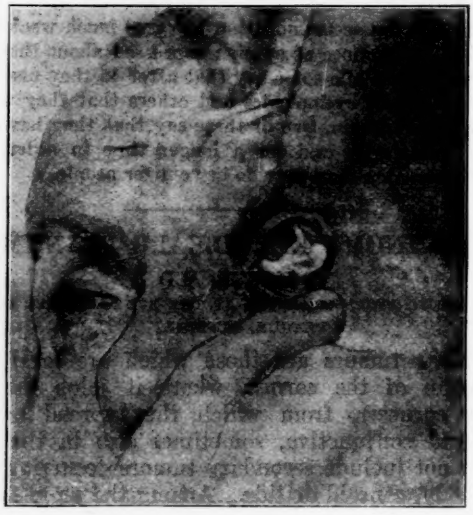

Fig. 1.—Photograph of the eye. Location of the tumor.

and edematous, the fornix slightly edematous and injected. The tumor is located in the lower half of the bulbar conjunctiva. It takes in the conjunctiva from the limbus cornea to the fornix irregularly, so that in the lower external quarter where it is broadest it measures 1.5 cm. There is a small extension into the superior external quarter, here touching the limbus, and it also extends downward so that a little of the tumor is seen occupying the inferior nasal quadrant. The tumor encroaching on the cornea a distance of two millimeters is irregularly margined and very well defined, so that at no place does it enter into the cornea. From the healthy conjunctiva, where the arteries are larger, the tumor is well limited with irregular margin and is raised 1.5 millimeters above the normal surface. The highest point of the tumor is in the inferior external quadrant, measuring 3 millimeters in thickness and 3 in diameter. The tumor is movable with the conjunctiva, the general tint is white. At the limbus it is a chalky white, while 3 millimeters from this point, that is, toward the lower border, it is dirty white and somewhat reddish. The surface of the tumor is slightly roughened, squamous and nowhere ulcerated. No arteries can be distinguished in the tumor, its consistency is hard. Cut No. 1 shows the exact localization of the tumor and its irregular outline. The surrounding conjunctiva is slightly injected.

In the examination of the remaining portion of the bulbus we find an incipient senile cataract and opacity of the corpus vitreum, together with a small degree of myopia. His vision is 5/30 (Snellen), with minus 2 D. equals 5/15.

The tumor was removed by one cut with Graefe's knife after the conjunctiva had been severed with the scissors around its entire margin. This enabled us to see that the tumor had been connected at its base with the limbus; in the inferior external quadrant it had been connected with the sclera only by a pedicle corresponding in place and size to the thickest portion of the tumor. These points or places of attachment were scraped with a sharp spoon, followed by cauterization. The entire wound was covered with the adjoining conjunctiva, held in place by two stitches. The wound healed in a week's time. After the operation the growth was put into 5 per cent. formalin alcohol. It was next put into celloidin, then the entire tumor was cut in the usual way with the microtome and stained with hematoxylin and paracarmin.

Macroscopic examination of the tumor while cutting it revealed its varying thickness, ranging from 3 millimeters, located as stated in the external inferior quarter, to the thinnest portion extending over the sclera and along the limbus, measuring ½ millimeter, or even less. The greatest diameter of the tumor was 2.5 cm.

THE MINUTE STRUCTURE OF THE TUMOR.

The microscopic examination will be reported, taking the cut sections from the lower border of the tumor upward to the cornea, where it ended. With low-power magnification we see in the first section the normal epithelium of the conjunctiva, and beneath it a little connective tissue. The conjunctival epithelium is stratified pavement cells with well stained nuclei. The cells at the base are cylindrical and becoming flatter from below upward. In this it is like the normal conjunctiva except that there is a round cell infiltration. Viewing the conjunctiva from below upward we find the epithelial cells gradually increase in size, and at the point where the tumor begins we find bands of epithelial tissue passing into the tissues below. In these bands we see epithelial cells concentrically arranged, with colloid areas here and there, producing the nest cells so characteristic of carcinoma, which are divided in the section in all directions; we also see round cell infiltration and dilated blood vessels. The surface epithelial cells are not very different from the normal; those, however, in the bands passing downward are increased in size, with mainly round nuclei; the nucleoli are readily seen with a low-power lens. Epithelial cells in the nest cells reveal bodies of keratohyalin (Fig. 2).

Examining a higher section, we see the epithelial cells of the surface changing in character. A layer of epithelial cells is to be seen here, as is seen in cells of the epidermis in the stratum granulosum. The cells here are flatter and contain much keratohyalin, which again is covered by typical cornea epithelium, as in keratosis cutis, which ends in the margin of the cornea and also corresponds to the place in the macroscopic examination where the tumor was chalky white and squamous (as seen in Fig. 3). The bands passing downward are broader, not so much divided as the bands in the previous section of the conjunctiva (see Fig. 4), and the cell nests are not so frequent.

When we examine the part of the tumor which is over the cornea we see that the fibrous papillæ are lower and the entire tumor decreases gradually, changing into the normal corneal epithelium. In those places where we see stratified epithelium the margin of tumor and normal cornea can be very well made out. Where the horny cells terminate the basal cells of the tumor gradually change to the normal basal cells of the cornea. The cell protoplasm is deeper stained (as shown in Fig. 5) and the preparations show that the elastic membrane (Bowman's) sharply divides the proper substance of the cornea, which is unchanged from the tumor. The bands (papillæ) are also here lacking. The entire tumor is well infiltrated with round cells. With low-power magnification we see that the entire tumor is in the epithelial conjunctiva. With higher magnification we perceive that the epithelial cells of the surface located at the limbus are horny epithelial cells, under

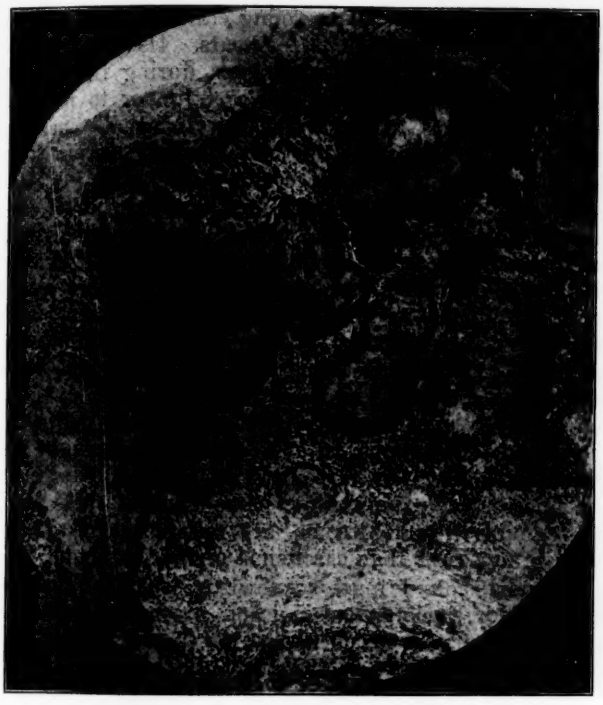

Fig. 2.—Microphotograph of the tumor in the conjunctiva showing cancroid epithelial bands and nest cells.

which we find cells containing keratohyalin which cause the chalky white color seen without the microscope. Below the limbus the tumor is of a pale milky color, which is explained by the presence of bands and cell nests containing colloid material, which are more numerous here than they are above, and which also make it impossible to see the blood vessels on macroscopic examination, though these latter are revealed by the microscope.

The microscopic examination shows us that the tumor is a carcinoma, as it contains cell nests containing the colloid material in the epithelial bands and its extension in all directions is also characteristic of cancroid tumors. But ulceration, which is so common in carcinoma, does not appear to have occurred.

In our case, as is usually the rule in epibulbar tumors operated on late, there was a recurrence on the sixteenth day after the operation. In the inferior external quadrant of the cornea a small point or macula about 1 millimeter in diameter made its appearance and was again removed and the spot cauterized. The microscopic examination of this recurring growth showed the same structure as the original tumor. Six weeks later three points of recurrence were again removed from the limbus in the inferior half of the cornea. At the beginning of August, two months after the operation, the condition was as follows: The eye was quiescent. The conjunctiva had healed very favorably, but in the two lower quadrants it was drawn tense toward the

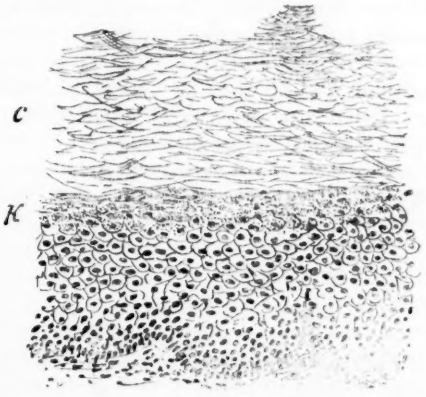

Fig. 3.—Section of tumor in limbus of cornea. C. Horny stratum. K. Stratum of cells containing keratohyalin.

side of the original localization of the tumor, where it was firmly adherent. In the external inferior quadrant, 1 cm. from the limbus, the conjunctiva was somewhat edematous, and beneath it could be detected on palpation a swelling of cicatricial tissue 9 millimeters in cir-

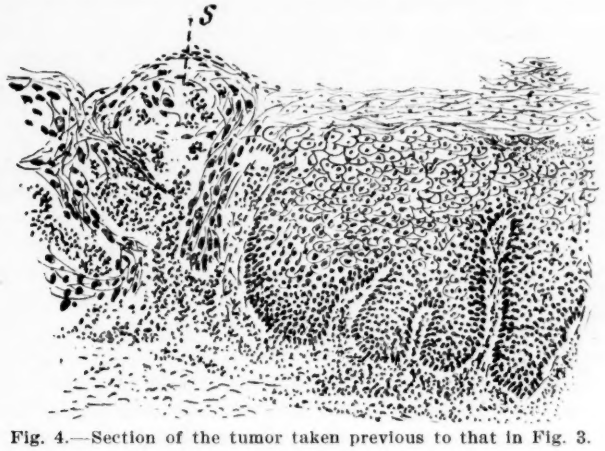

Fig. 4.—Section of the tumor taken previous to that in Fig. 3.

cumference. In the limbus no recurrences appeared. Instructing the patient to come back instantly as soon as he noticed any white point or change in the appearance of the eye, he was discharged. He returned again for treatment at the beginning of November with two

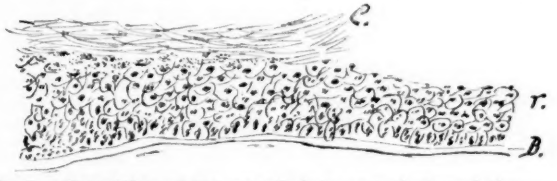

Fig. 5.—Transition of the growth into normal corneal tissue. B. Bowman's elastic membrane. r. Normal epithelium. C. Horny stratum of tumor.

recurrences located in the inferior external quadrant, one at the limbus about 5 millimeters in circumference, the other in the conjunctiva at the point of the existing edematous cicatrix measuring 2 millimeters in circumference. It was not possible to remove these recurrences at this time, as he had an attack of bronchiolitis and bronchitis. The recurrences did not surprise us at all,

as we looked for them on account of the large size of the tumor. Therefore, only a conservative plan of treatment was possible at this time, as we did not look for immediate trouble in spite of the presence of the new growths, and as the eye had fair visual power enucleation was not seriously thought of.

In our patient there appeared to be a direct relation between the carcinomatous tumor and angioma contrary to the recently expressed opinions in the literature on the subject of angioma and telangioma. It was noticed that our patient had some small pin-head angiomas in the skin of the breast and also very numerous small lentigines. As regards the statistics of carcinoma it may be remarked that in this region such epibulbar tumors are very infrequent. This rare case is published mainly on account of the practical points involved. As regards its etiology, it may be said that we found nothing giving evidence either in the clinical or microscopic examinations of any parasitic origin.

The special practical point of the case to which we will call attention is the common error, so liable to be made, of neglecting an incipient tumor occurring at the limbus or its vicinity. The chief condition with which it is likely to be confounded is phlyctenular ulcer. The celebrated von Graefe made an error of diagnosis in a disease occurring at the limbus. He said that at the first examination he did not make a very careful study of it and so diagnosed a case of carcinoma as a phlyctenular ulcer, and our case had also been previously treated as such by a general practitioner. It appeared, however, in a man of 78, and in our experience phlyctenular ulcer is especially a disorder of children, but we must not overlook the fact that it also occurs in the adult, and even in old age, hence the importance of the differentiation.

Phlyctenular ulcer in the limbus or near the limbus appears as a white spot in the conjunctiva surrounded by inflamed conjunctiva and no arteries are to be seen in the phlyctenule itself while numerous vessels run to the border of the cyst, but none can be traced running over it. Unpigmented sarcoma and carcinoma also start as a grayish white cyst with highly hyperemic surrounding conjunctiva, the remaining portion of the conjunctiva being unchanged. The phlyctenular cyst usually ruptures on the first or second day, leaving an irregularly margined ulceration. This does not occur in tumors except in cancroids or carcinoma planum where the ulceration appears late, occurs in the center of the growth and leaves a lesion surrounded by a hard or indurated wall. In our case no ulceration took place, the superficial layers of the tumor being as hard as callus. Phlyctenular ulcers usually occur in both eyes, and patients have suffered repeated attacks of inflammation during childhood, usually leaving some maculæ of the cornea, blepharitis eczematosa and rhagades of the nostrils. They are improved or cured in a few days with the use of calomel or Pagenstecker's ointment. The contrary to this is the case with tumors. They usually occur in one eye and in old age, and not in young adult life.

Finally, the following difference between phlycentula and tumor in the cornea is to be noticed: In phlyctenules a thick infiltration occurs in the cornea and conjunctiva with later ulceration, leaving an ulcer with irregular wall and infiltrated surrounding tissue. In carcinoma or sarcoma we find a small tumor with smooth walls irregularly protruding over the surrounding surface. In the second place we must differentiate it from inflammation of the sclera (episcleritis). In this disorder we have a small swelling close to the limbus, purplish in color. The conjunctiva over the swelling is injected, otherwise unchanged. Such a swelling may lead to error, which may be mistaken for tumor of phlyctenular ulcer. The conjunctiva will give us the clue in case of doubt, as it is movable over the infiltration in the sclera in episcleritis only, and beneath it we may find on palpation a small swelling of variable size and of hard consistency.

Further, we have the differential diagnosis from vernal catarrh, which is characterized by the hypertrophy of the conjunctival epithelium, corresponding to the palpebral fissure, in location reaching the limbus and rarely ever surrounding the entire cornea, seldom extending over it, and furthermore, of hard consistency, and it is irregularly prominent with grayish white borders. Microscopic examination reveals hypertrophy of the epithelium, as also in tumor, but in spite of this it is a non-malignant disorder. Vernal catarrh usually appears in young children and involves both eyes. Its duration is for years. Its exacerbation during the summer and remissions during the winter months will always enable the practitioner to make a correct diagnosis. Vernal catarrh is usually accompanied by hypertrophy of the palpebral conjunctiva, which is rough in appearance and milky white in color. Lastly, the rate of growth is different from that of sarcoma and carcinoma, being more rapid in the latter. In the differential diagnosis between sarcoma and carcinoma we especially here consider only the more prominent carcinomatous tumors (carcinoma luxurians) and the flattened variety, as in our own case (carcinoma planum). Sarcoma is hard, has vertical margins; carcinoma is usually soft and can be easily lacerated. It is not abruptly margined as in sarcoma, but graduates more into the tissues. In spite of these differences the differential diagnosis is sometimes impossible without the microscopic examination. One-third of these tumors, carcinoma and sarcoma, are melanotic and graver in their prognosis than carcinoma planus (cancroid).

In conclusion, I must acknowledge my indebtedness to Professor Deyl for material help given me in preparing this paper, for which he has my thanks.

LABORATORY INSPECTION OF VACCINE.

ADOLPH GEHRMANN, M.D.
CHICAGO.

In this paper the term vaccine is used in the restricted sense, meaning smallpox vaccine. The purchases of vaccine by the Chicago Department of Health have been subject to inspection and test of each lot received since 1894. During July, 1894, an extended investigation of vaccine was made and showed that glycerinated lymph contained fewer bacteria and had a longer period of efficiency than the dry vaccine points. Glycerinated vaccine was therefore introduced and has been used exclusively ever since. The exact date of the first distributions was Aug. 1, 1894. The points herein brought out are consequently based on the inspection of this supply of the glycerinated product. There have been distributed to the vaccinators approximately one million individual vaccinations from that date to this. Some 20,000 tubes have been used for the purpose of testing; 10,000 for the bacteriologic and animal experiments and 10,000 for the clinical tests.

Every lot received is sent subject to approval and is accepted only after full completion of the observations.

It has been further understood that the department reserved the right to destroy any lot that did not meet its approval. Vaccine has been destroyed on several occasions when found inert, but when rejected because of bacteria it is usually returned to the producers with instructions to allow it to mature before being distributed.

STANDARD REQUIRED.

Deliveries are made in lots of 5,000 to 10,000 vaccinations. Only individual tubes are used. For each lot the following conditions must be fulfilled:

The lot must be from one operation; that is, it must bear the same laboratory number throughout.

The dates on the packages must not precede or exceed the time limit of efficiency. Sixty-day emulsion with 40 to 50 days for the period of use.

The physical conditions must show a uniform emulsion.

Cultures made must show an absence of pus bacteria.

Cultures made must show at least a relatively small number of saprophytic bacteria.

The injection of the mixed contents of 10 or 12 tubes into a guinea-pig must be negative.

The clinical test must give not less than 90 per cent. in typical results in primary vaccinations.

SELECTION OF SAMPLES.

From all parts of the lot 100 tubes are selected; these are marked and reserved for the test. We have found this number ample to insure accuracy. As a general precaution advance sample lots are obtained from producers and tested in the same way as the actual supply. By this means a double check is maintained. This testing, together with the producers' private control, should prevent any failure to detect possible defects.

SPECIAL CONSIDERATIONS.

Soon after the introduction of vaccine in sealed tubes it was noticed that a separation of the more solid particles, epithelium, leucocytes and detrites, took place from the glycerin if the tubes remained quiet for three or four months.

The vaccine as now prepared consists essentially of ground-up epithelium in a variable percentage of glycerin and water. If this mixture is not accurately adjusted, a matter dependent on the experience of the producer, it may be too thin and a separation takes place after a time. We have been able to show that tubes in which such separation is apparent will give a larger percentage of failures in the clinical test than if it had been recently tubed and still in proper emulsion. The reason for this is evidently that the thin glycerin is blown out and does not carry with it a sufficient amount of the virus.

For the culture test it would seem that the use of inclined agar answers all requirements. Each single tube is blown out on the agar surface and spread with the aid of the condensed water in the bottom of the tube. This water also dilutes the vaccine and prevents the further restraining action of the glycerin. The inoculated tubes remain in the incubator for 48 hours and then at room temperature for a further period of three to four days. Petri plates of agar and gelatin have been used from time to time, especially when an actual count of bacteria present was desired. As the qualitative determination is the principal point sought, the agar tube culture is sufficient for this purpose. During the spring of 1896 experiments were made to determine the value of strong antiseptic treatment of the vaccinated area on the calf before scraping off the vaccine, as a means of reducing the numbers of bacteria usually found. It was shown that material with few bacteria could be obtained, and in several instances entirely sterile fresh vaccine was made. Clinical tests of this, however, gave poor results and total failure for that which was sterile. There is a mean that must be followed in producing the virus. It must be as clean as possible, but can not be made initially sterile by using antiseptics. The identification of the bacteria is made by the usual methods.

Saprophytic bacteria are not to be overlooked. They do not develop as rapidly as the pus cocci, and on this account the culture must be kept under observation for several days. The absence of these species indicates clean production. On numerous occasions *Bacillus subtilis, Cladothrix dichotoma* and varieties of moulds and yeast have been present in such numbers that the vaccine had to be rejected on this account.

Animal experiments are made on guinea-pigs. About 10 to 12 tubes are evacuated and the contents mixed with a small quantity of bouillon and injected subcutaneously. This part of the test is made when the tube cultures show a sufficient reduction in the number of pus bacteria.

From the animal experiment the presence of *B. tetani, B. tuberculosis* or other specific pathogenic bacteria should be determined. After making several hundred inoculations I have not had a single animal die of tetanus or show tuberculosis at the point of injection. These bacteria occur with extreme rarity in vaccine, and probably in the few cases where they have been reported they could have been found in considerable numbers.

The time required for these experiments is 4 or 5 days. Cultures are made first, which in the incubator will indicate as to pus bacteria in 18 to 24 hours. These tubes are now put aside for growth of saprophytes for 3 or 4 days. In the meantime, providing that the culture result was satisfactory (few or no pus cocci), the animal experiment is made. The clinical test is next started, and requires a further 10 days for completion. If this shows 90 per cent. typical the lot is passed for distribution. Fourteen days, therefore, is thus used in establishing the quality of the product, and this should give at least 30 days in which the vaccinators can use their supply with every assurance of a safe and successful result.

Laboratory of the Department of Health.

Professional Unselfishness.—It might almost seem to a philosophical observer as if the leaders in this movement had unselfishly made up their minds to prove to men and women that if they had more common sense they would promptly abolish the medical profession by taking away its *raison d'être*. One seldom hears of a lawyer exhorting his neighbors to avoid litigation so that they may not require his services. Yet every reputable physician is expected not only to cure diseases, but to give his patients such hygienic advice as may prevent them from needing him again. This is a good deal to expect of human nature in individual cases; but the problem which is at the present moment most strenuously attacked by the medical men of Europe and America is how to reduce the number of their patients and the amount of their own income by 10 per cent. at one fell swoop. At least one person out of every ten dies of pulmonary tuberculosis and other forms of tuberculosis, and it is this disease that physicians are now striving with all their might to exterminate utterly, or at least to limit as much as possible. Since tuberculosis is rarely contracted by the medical practitioner, his labors in striving to eliminate it from his practice accordingly stand as a remarkable exemplar of humanitarian altruism.—"N. Y. Evening Post."

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CHEMICAL INDIVIDUALITY.

There are abundant evidences of the chemical differentiation of species, which in some instances is as prominent as the morphologic distinctions. For example, we find specific varieties of hemoglobin, which, although functionating similarly in all animals, and with closely related composition, yet show quite different crystalline forms. Probably the differences in the effects of drugs on different animals depend on different chemical composition of certain parts of the animals. The entire work on immunity testifies to these chemical peculiarities of divisions in the animal kingdom. Even natural selection plays a part in such differentiation, as seen in the protective colorings, the venoms, the defensive odor of the skunk, or the ink discharged by the cuttle-fish. The peculiarity of proteid metabolism by which in reptiles and birds the chief end product is uric acid, while in mammals it is urea, has been the pivotal point for most of the study, theorization and contention that have made "uric acid diathesis" familiar even to the laity. Now, while the morphologic differences in animals are plain, and therefore the chief basis for classification, the chemical differences are for the most part equally obscure, and hence of little use in systematic classification. Still it is altogether possible that as physiologic chemistry becomes more developed, and the methods more refined, the chemical relationships may help out in places where morphology alone is confusing. Probably the best example that can be cited of accomplishment in this direction is furnished by the precipitins of serum, as used in the medicolegal test of blood or other proteid constituents or secretions of the body. The serum of an animal immunized against human blood will precipitate in certain dilutions besides human blood the blood from not one of the vast number of allied and remote varieties of animals except certain of the higher apes. The relationship between the apes and man, based entirely on morphology, receives suddenly confirmation from an unexpected source. As these precipitins are in a high degree specific, serving to differentiate animals that are not very unlike, this fact indicates strongly not only a common origin of man and the apes, but also that some very peculiar constituent of the blood serum of the common ancestor has passed on unchanged through the widely divergent lines of descendants.

Not only are there differences in the composition and metabolism of different species, but even in a single form there are variations in metabolism that may sum up under certain conditions until they crop out suddenly in what may be called a "chemical sport." A. E. Garrod[1] discusses this matter in an entertaining way in his article on "Alkaptonuria." Alkaptonuria is a peculiar and uncommon condition in which the urine contains homogentisic acid, a substance that is related to tyrosin, from which it is probably derived. Although rare, it is so striking that it is likely to attract attention, for the homogentisic acid has the property of turning dark after exposure to air, and of staining fabrics deeply. Physiologically considered alkaptonuria is interesting in that it seems not to indicate a disease, but is rather an unusual method of metabolism, generally congenital and lasting throughout life. A certain amount of tyrosin does not pass through the usual steps of metabolism, but is excreted in this form, without giving rise to symptoms and seemingly without injury. If present at all it exists in considerable quantities, usually 3 to 5 grams daily, and is never observed in traces. It is distinctly a family disease, for of 32 known instances 19 have occurred in seven families, in which there were altogether but 29 normal members.

Of particular interest in connection with this chemical individuality is the frequency of consanguineous marriages in the immediate ancestry of alkaptonurics, for among 19 cases in which information on this point could be obtained, 60 per cent. were the offspring of marriages between first cousins, and in one the condition was transmitted from father to son. Mendel's law of transmission of characteristics seems to Garrod to offer an explanation. If a tendency to the production of a rare recessive characteristic exists in two individuals the offspring may show the characteristic strongly developed; in marriage of cousins such a rare tendency as this one would be more likely to be present on each side than in ordinary matings. Albinos offer perhaps another instance of similar conditions. Albinism is a chemical phenomenon, depending on a failure of formation of melanin, and it occurs in undue proportion among the children of consanguineous marriages. Retinitis pigmentosa, which in a way is the chemical opposite to albinism, occurs to a remarkable degree among the offspring of cousins. These are all instances of chemical abnormalities that are of such a nature that they can scarcely escape observation. It is perfectly possible that there are many less obvious chemical abnormalities that escape detection. They are interesting in that they indicate that perhaps just as no two individuals are identical in their morphology, so there are differences in their chemistry. Sometimes tendencies are added together by marriage of relatives, and the sum appears in some anatomic peculiarity on the one hand, or as an albino or alkaptonuric on the other. Again, the tendency develops suddenly into a distinct characteristic, and a sport is developed without evident or adequate cause.

1. The Lancet, Dec. 13, 1902, p. 1616.

EPILEPSY (?) AND RAILWAY ACCIDENTS.

In recent communications to a railroad paper two experts on railway matters offer their explanation of the too frequent unaccountable accidents that occur. These are generally due to mistakes on the part of the engineer, who, though often long-tried and experienced, may suddenly fail in his duty in the most remarkable way. He may neglect a signal, over-run his time or disobey an order, and the consequence is disaster. The theory adopted by these writers is that locomotive engineers, owing to the nature of their occupation, are especially subject to nervous strain which develops in them a form of epilepsy in which their reasoning power or judgment is temporarily destroyed. One of them states that the concentrated attention required for long periods of time brings about a peculiar nervous disturbance that has many of the external appearances of petit mal. The other expert likewise considers that an epileptic factor is involved. This is bringing into play a serious symptom and seems to us more than is required.

There is no question that certain people under certain special conditions of health or mental strain may have their cerebral mechanism so thrown out of order as to fail them in important crises; a sort of self-hypnotism is perhaps not altogether uncommon. An expert railway man riding over a specially bad piece of road on an engine noticed that the engineer signaled to stop the train. Nothing wrong could be seen, but the man had developed an actual hallucination of sight and thought he saw at a particular spot a boulder across the track. In this case it was overcaution, but in other cases the reverse might occur. Railroad companies are not sufficiently considerate of their employes when they overwork them and subject them to special nervous strain by long hours. It is easy to see how the special faculties of meeting emergencies quickly, etc., may be dulled or even abolished by fatigue. A man who has been excessively overworked can hardly be considered responsible if he sometimes fails in emergencies. The companies should also look carefully into the habits of their employes. The engineer should consider his employment first and use his resting time in such a way that he will be in the best fitted condition for his work. Dissipation in the way of loss of sleep, etc., which may be entirely voluntary on the part of the individual, may lead to disaster.

The traveling public is certainly deeply interested in the matter, and in this country the traveling public includes nearly every one. It is not pleasant to think that one's safety is entrusted to a man who has more demanded of him than his nervous system is capable of performing, or to one who does not duly economize his energies in such a way as to bring about this same condition. The time will come, we hope, when railroad regulations will be so perfected that more careful scrutiny will be kept over engineers, conductors and those in similar responsible positions to insure that they will be at all times mentally and physically fitted for their responsibility. There may be epileptics acting as engineers, as appears to have been the case in some instances, and they should certainly be relieved of their responsibilities, but it is not necessary to drag in such a factor as epilepsy to account for accidents. There are many less formidable conditions which may, under certain circumstances, have equally disastrous results.

COSMOPOLITAN DISEASES IN THE TROPICS.

The concluding chapter of Scheube's translated work of Diseases of Warm Climates is devoted to medical geography, or what the author calls "cosmopolitan diseases." It gives a compendium of the facts, so far as known to the author, of the distribution of certain general diseases, and this has been made the subject of an interesting editorial commentary in the *Indian Medical Gazette* of March, 1903. While most of the so-called cosmopolitan diseases are pretty fairly distributed, there are some decided differences in their range, and some of the comments on Scheube's statements by the editorial writer are worthy of note. The editor thinks there should be a good deal more attention paid to the geographic etiology of disease. The same theories that apply in one country are not by any means always applicable in another. Hepatic cirrhosis, for example, which he thinks may be very properly called "gin liver" in Europe, can not be considered to be due to the same influences in India.

One of the curious facts pointed out by both Scheube and the editor is the absolute absence of scarlet fever in the tropics. While it may be imported into such regions, it never spreads, and it would be interesting to know what special causes in the temperature or otherwise there may be for this peculiarity. Erysipelas, which Scheube considers rare, is not at all unknown in India, and pneumonia, which is unevenly distributed, lacking in some regions, is almost as serious a disorder in Indian territories as it is in Europe and America. At the present day it has come to be more dreaded in some Indian jails and public institutions than even dysentery used to be. Another disease which seems to be lacking in tropical countries is acute rheumatic fever, not chronic rheumatism, and while it occurs, it is by far less frequent among the natives than is the case in other climates.

Sunstroke, which we attribute to temperature, is in fact rare in some tropical countries. Perhaps this may be due to the sanitary habits to which the residents have been educated in regard to it. The *Indian Medical Gazette* rejects Sambon's theory of a specially infectious type, the so-called "siriasis." Scheube fails to recognize insolation as a tropical disease so much as to give it a special chapter, though he notices it among his cosmopolitan disorders. This is a very interesting subject, worthy of close study and offers certain problems that will serve to occupy medical attention when once it is directed to them. A careful study of medical climatology and geography would certainly be suggestive as

regards the measures to be taken to meet some of our more obstinate and serious affections. If scarlet fever can not exist in warm climates there ought to be some fact to account for it that might very probably be of utility in its management where it does occur, and similarly with other disorders.

RECENT STUDIES ON SNAKE VENOM.

Contributions from various workers during the past year have revealed important facts concerning the action of snake venom, and incidentally some gain has been made in our knowledge of the chemistry of "immunity reactions."

The important studies made are reported by Flexner and Noguchi in two articles,[1] Calmette,[2] Keys,[3] and recently Keys and Sachs.[4] The work of Flexner and Noguchi[5] has furnished, among others, the following important observations: Venom contains only intermediary bodies or amboceptors (no complement), and alone would not be of great toxicity; the normal serum of susceptible animals contains the substances (complements) which, by a conjoint action with the intermediary bodies of the venom, cause the toxic phenomena; the loss of bactericidal power of the blood of animals poisoned with venom (previously noted by Welch and Ewing) is due to fixation of the animal's complements by the venom; the serum of snakes contains very little complement for its own venom; snake sera owe their toxicity to hematoxin (hemolysin), cobra venom to its neurotoxin, and rattlesnake venom chiefly to a substance which they call hemorrhagin (an endotheliolysin, the effect of which is to impair the vessel walls, causing hemorrhage); the demonstration of toxoids in venom, and a proteolytic ferment. Other valuable observations are made, a good understanding of which demands perusal of the original; but it may be stated that support is added to the Ehrlich side-chain theory, by showing that the neurotoxic principle in venom may be fixed and abstracted *in vitro* by nervous tissue, which duplicates observations with tetanus toxin.

A short time after the first publication by Flexner and Noguchi, Calmette disputed some of their findings in a note to the Académie des Sciences, but he did not clearly grasp the nature of the reactions and substances he described. He made one very important observation, however, to the effect that a normal serum which was heated to 62 C. or above had a strong activating power for venom. As this temperature destroys ordinary complements he had discovered a new substance which he considered to be of the nature of intermediary body.

Keys was able to confirm the claim that cobra venom consisted of amboceptors alone, and, in opposition to Calmette, he supports the observation of Flexner and Noguchi that normal complement will activate venom. He also made the important discovery that the supposed amboceptor, or *sensibilisatrice,* as the French have it, of Calmette was in reality another sort of complement, which came into evidence only after normal serum is heated to 62 C. or even to 100 C. Painstaking study of this substance seemed to show conclusively that it is nothing more than the lecithin which is contained in normal serum; and since in certain cases the corpuscles (washed) themselves activate the venom, it was eventually proved (Keys and Sachs) that the lecithin which is bound in the stroma of the red cells also can play the part of complement for cobra venom. Keys and Sachs established clearly the non-identity of normal complement and lecithin complement, and discovered other substances which may act similarly: Kephalin, bile and milk (goat) when heated to 100 C. Their experiments lead them to conclude that probably it is the fatty-acid radical of the lecithin-venom combination which constitutes the active group.

Of the mass of facts marshalled by the different investigators mentioned two are of pre-eminent importance: the presence in the blood of certain complements may be in particular cases, as in venom intoxication, a source of great danger to an individual rather than a protection, and that definite chemical substances may be able to act as complements under certain conditions.

1. Flexner and Noguchi: Journal of Experimental Medicine, March 17, 1902. Univ. of Penn. Med. Bul., November, 1902.
2. Calmette: C. r. Acad. des Sciences, June 16, 1902.
3. Keys: Berliner klinische Wochenschrift, Nos. 38, 39, 1902.
4. Keys and Sachs: Ibid., Nos. 2, 3, 4, 1903.
5. See also on this subject, THE JOURNAL, April 18, p. 1105, Absts. 48, 49 and 50.

INTELLIGENT COWS.

In an interesting article on the "Milk Supply of Large Towns" in the *British Medical Journal,* March 28, we find the following remarkable statement: "The driver having finished milking, his cow offered to take me into an adjoining room where the milk was cooled, saying that while he fetched the manager I could have a look around." We submit that there has been nothing so remarkable since the days of Balaam. One would think that with such intelligent cows dairy reform would be easy. Notwithstanding the high authority of the *British Medical Journal,* we have our doubts as to the alleged fact.

EXPERT TESTIMONY.

In a recent trial in Detroit the judge criticised the law of Michigan regarding the admission of expert evidence as being defective. A physician was on the witness stand who, as a county official, had made an autopsy and a chemical analysis of stomach contents. In the cross-examination it was attempted to draw out his opinion on certain chemical points as an expert, his testimony having chiefly been as to facts. In response to objections made by opposing counsel the judge said the matter was a simple one; if the witness was not a fully qualified expert he ought not to be thus cross questioned, that the laws of Michigan did not fully cover this question of the admission of expert evidence, and that there should be further legislation on the subject. If we understand the judge's position, it is that there should be some legal regulation as to who is and who is not an expert whose opinion evidence ought to be admitted by

the court. Every physician is supposed to know something of chemistry, bacteriology, surgery, psychiatry, etc., but only those who are specialists in these departments can rightly give an expert opinion. It seems to us that this Michigan judge has pointed out one of the most serious defects in our methods of utilizing opinion testimony, and one that, if remedied, would relieve at least medical expert testimony from a great deal of the opprobrium under which it at present suffers. If the law prescribed a certain standard of expertism, if it required any one testifying as an expert to prove that he had a certain amount of actual knowledge of or experience with the subject on which he was to give an opinion, and still more, if it required a recognized professional reputation as an expert in the specialty he professes to practice, there would be less talk of the worthlessness of medical expert testimony. As it is, in most parts of the country at least, any medical practitioner of any school can pose as an expert on any medical subject. This rule of requiring some proof of competency would not necessarily exclude venal experts, but there are fewer of these among those generally qualified than is perhaps supposed. A man with a genuine reputation will not be so ready to risk it for a fee or a series of them. Let legislation be passed rationally defining the qualifications of an expert, even a little arbitrarily, if it is impracticable to do otherwise, and we shall hear less of such tirades against medical expert testimony as that uttered a few months ago by a New York ex-judge. As it is, the legal profession has it in its power to obtain competent and honest expert opinion testimony if it wants it. The trouble is that, too often, it is not the kind it wants.

PLANS FOR BUILDINGS FOR THE ROCKEFELLER INSTITUTE.

We understand that the drawing of plans for the buildings of the Rockefeller Institute of Medical Research is imminent. We hope that those in whose hands the decision as to these plans lies will neither make the mistake of indulging in extravagant architecture, nor be guilty of an error, much more common among scientific men, of imagining that the nature of the building and the quality of the materials put into it are matters of insignificance for the success of the foundation. We are all familiar with the lamentable squandering of college bequests in unnecessarily pretentious buildings to an extent that has precluded the acquisition of men of eminence for the faculty and has paralyzed efficiency by failure to provide an adequate budget for maintenance and operating accounts; such misguided expenditure of capital can not be too strongly condemned. But we fear that, in some scientific circles, the value of good buildings of a permanent character and of dignified and sufficiently imposing exterior has been and is insufficiently appreciated. An idea is prevalent among many that a scientific laboratory should be built in so flimsy and cheap a manner that it may conscientiously be torn down and rebuilt to suit more modern conditions in the course of five or ten years. It is further gratuitously assumed that because great men have done and doubtless will continue to do great work in hovels and dungeons with the most meager outfit, that therefore proper housing and the liberal provision of equipment are matters which can safely be disregarded. We grant readily enough that if we had to choose between great men with poor buildings and equipment and mediocre men with elaborate buildings and extravagant equipment, there would be no doubt that we should decide to take the former, but we maintain that wherever possible the great men and ideal facilities should be brought together. Now that the unit system of construction with modifications of it has been introduced there is much less danger than formerly that in the course of a few years a building will become unsuitable for what it has been designed. Besides, the effect of noble surroundings on the investigators themselves has to be thought of as well as the influence of a dignified architecture on the standing and support of an institution in the community. It would be a misfortune, indeed, if the institute now being planned should make that mistake in disregarding the character, quality and location of its buildings which was made in so striking a manner by one of our American universities, a mistake which, in spite of the great men obtained by an otherwise most sagacious president, has led to a hampering of its development, and, in part at least, has been responsible for a threatening of arrest of some of its high functions.

Medical News.

ILLINOIS.

Intending Practitioners.—The State Board of Health, on April 15, 16 and 17, conducted an examination of 181 candidates to practice medicine in Illinois. Of these, 25 were women.

In Memoriam.—At the meeting of the Fox River Medical Association in Elgin, April 14, Dr. James W. Pettitt, Ottawa, delivered an eloquent address eulogistic of the late Dr. Edgar P. Cook of Mendota.

The medical practice act was passed by the senate April 15. The bill would divorce the board of medical examiners from the State Board of Health, which has hitherto held all examinations for physicians' licenses. The bill is not yet passed by the house.

Chicago.

Cook County Internes.—The result of the examinations for interneships in Cook County Hospital was made known April 17. Rush Medical College secured 6 places; Northwestern University 7 places and the University of Illinois 3 places.

Personal.—Drs. Wellington T. and Harry J. Stewart have sailed for Europe.——Dr. John Kercher, in resisting a levy on his property, April 17, shot a constable, and is under bonds awaiting the outcome of the wound. After he had shot the man, learning that he was a constable, Dr. Kercher surrendered to him.

High Mortality.—With one exception the week's mortality is the highest of the year. During the week ended February 28 there were 713 deaths recorded, giving an annual death rate of 19.73 per thousand of population—the highest rate for any February week in the history of the department. Last week 640 deaths were recorded, and the annual rate was 17.69 per thousand. The principal causes of death were pneumonia, 135; consumption, 75; Bright's disease, 52; bronchitis, 39; heart disease, 36, and violence 37. There were 75 more deaths from diseases of the respiratory system and of the kidneys last week than during the week of April 4—an increase of exactly one-third.

Diminishing Deaths Among Young.—The Department of Health, despite the high death rate, finds consolation in the steadily diminishing number of deaths of infants and young children as follows:

During the six years preceding the present administration of the department there had been 66,003 deaths of those under 5 years of age; during the six years of the present administration, 1896-1902, there have been only 51,046 such deaths, or 14,957 fewer than in the first period. But this tells only part of the story. The population of the city increased, according to the United States census, 5.4

per cent. per annum between 1890 and 1900, and it is fair to assume that the under-5-years population increased in at least the same ratio. It follows that if the death-rate of the earlier period had been continued during the last six years there would have been 87,387 under-5-years-of-age deaths instead of the 51,046 that did actually occur.

MARYLAND.

New Hospital Site.—The first site of Cambridge Hospital has been sold for $2,500, and a new site on a bluff commanding a view for miles of the Choptank River has been purchased. It is expected the new building will be ready for occupation by June 1, 1904.

Baltimore.

Deaths of the Week.—The number of deaths last week was 233 against 176 for the corresponding week last year, an annual death rate per 1,000 of 20.97. Consumption caused 43 deaths, pneumonia 31, Bright's disease 26, and typhoid fever 6.

Reception to Dr. Cordell.—A reception was tendered Dr. Cordell, April 21, by about 50 members of the Medical and Chirurgical Faculty, in commemoration of the completion and publication of the centennial volume, "The Medical Annals of Maryland," which has been in preparation for the past five years. Dr. Cordell gave a résumé of the work. It is a handsome illustrated volume of 900 pages.

Association of Endowed Medical Schools.—It is said that a proposition has been submitted by a representative of Chicago University to found an association of endowed university medical schools, somewhat on the plan suggested by Dr. Barker some time ago. A meeting has been called in Washington next month, but only about half a dozen of the leading schools have been invited. It is understood that Johns Hopkins University objects to this narrow limit.

Oppose Higher Standards.—Opposition is developing in the colleges to the proposed amendment to the regulations of the American Medical College Association raising the standard of preliminary requirements. The effect of this amendment, it is thought, will be to make the standard equivalent to graduation from a high school. At a recent meeting of representatives of the faculties, all present, except the delegate from the Johns Hopkins Medical School, voted to oppose it at the coming meeting at New Orleans.

Personal.—Dr. August F. Volkman celebrated his golden wedding, April 12.——Dr. Benjamin R. Schenck has resigned from the staff of the Johns Hopkins Hospital, and will enter on practice at Detroit, Mich. The vacancy will be filled by Dr. John A. Sampson.——Dr. L. Ernest Neale is in London.——Dr. B Bernard Browne has been seriously ill from an infected wound. He was operated on by Dr. Tiffany, and a mass of glands removed from his axilla.——Dr. John Stephenson, professor of anatomy at the University of Edinburgh, was in the city last week.——Dr. Herman Westphal has gone on a visit to Deer Lodge, Montana.——Dr. J. Clement Clark has resigned the chair of psychiatry at the Woman's Medical College.

MASSACHUSETTS.

Epidemic of Pertussis.—Boston is in the midst of a semi-epidemic of pertussis, especially that portion of the city known as Back Bay. Four deaths were reported last week.

Emergency Ward Opened.—The Visiting Nurse Association of Winchester has equipped a surgery for the treatment of accident cases and for slight surgical dressings, as a first step toward a hospital.

Addition to Hospital.—An addition to the Lynn Hospital, which will be two stories, 83 by 37 feet, to accommodate 17 patients on the lower floor and provide 12 private rooms on the upper floor, has been started.

Faculty Changes.—Harvard overseers have elected Dr. Edward H. Bradford professor of orthopedic surgery, Drs. Maurice H. Richardson, and Herbert L. Burrell professors of clinical surgery, and Dr. John H. McCollom, assistant professor of contagious diseases.

Boston Health.—The report of the board of health for the week ending April 18 shows an annual death rate of 19.57 per 1,000. There were 26 cases of diphtheria reported, with 6 deaths; 25 of scarlatina, with 1 death; 9 of typhoid fever, with 1 death; 28 of measles, with 3 deaths; 25 of tuberculosis, 22 deaths. Pneumonia caused 36 deaths, heart disease 16 and bronchitis 5 There were 76 deaths in public institutions.

Boston City Hospital.—Reports for the year ended Jan. 31, 1903, 8,462 patients treated, with 875 deaths. The daily average was 401 patients. There are 32,152 out-patients. The entire expense was $472,873.54. The south department (contagious) has been many times much crowded A measles ward is the great need there. The relief station in Haymarket square has been a great success. Here, for an expense of $34,905.24 in the first 11 months, 19,064 out-patients were given first treatment, and 1086 were kept in the wards one or more days, and 765 ambulance calls were answered.

MICHIGAN.

Personal.—Dr. Albert A. Parisot has been elected mayor of Mount Clemens.

Memorials.—At the April 9 meeting of the Wayne County Medical Society, Detroit, suitable resolutions were passed regarding Drs. Peter Klein and Edward W. Jenks, deceased members.

New Medical Building Opened.—The new medical building at the University of Michigan, Ann Arbor, was formally dedicated, April 2, the opening address being made by Dr. Herman Kiefer, Detroit, the former regent.

Physician Assaulted.—Dr. Abram M. Crawford, an aged practitioner of Michigan Center, was assaulted by some person unknown, while sitting in his house, March 30. A deep scalp wound was made, and an artery severed. It is believed that Dr. Crawford will recover.

Most Dangerous Communicable Diseases.—Meningitis was reported in March at 7 places; whooping cough at 51 places; diphtheria at 62 places; typhoid fever at 62 places; measles at 120 places; scarlet fever at 147 places; smallpox at 169 places, and consumption at 189 places. Reports from all sources show meningitis reported present at 2 places less; whooping cough at 5 places more; diphtheria at 15 places less; typhoid fever at 27 places less; measles at 17 places more; scarlet fever at 52 places less; smallpox at 32 places less, and consumption at 4 places less in March than in the preceding month.

Comparative Morbidity.—For March, compared with the preceding month, intermittent fever and typhoid fever were more prevalent; and smallpox, erysipelas, inflammation of bowels and diphtheria were less prevalent For the same month, compared with the average for March in the 10 years, 1893-1902, scarlet fever, smallpox, whooping cough and typhoid fever were more than usually prevalent; and consumption, inflammation of kidney, intermittent fever, erysipelas, inflammation of bowels and remittent fever were less than usually prevalent. The diseases which usually cause the most sickness in Michigan at this time of the year were slightly less prevalent than usual in the March just passed. This lessened prevalence was apparently due to the higher temperature, and the lessened amount of ozone during the month.

March Mortality of Michigan.—The total number of deaths reported for March was 3,034, or an increase of 278 over the preceding month. The death-rate, however, was exactly the same as for the preceding month, 14.4 per 1000 population. The mortality was slightly higher than for March, 1902. Important causes of death were as follows: Tuberculosis, 237; typhoid fever, 48; diphtheria, 34; scarlet fever, 22; measles, 29; whooping cough, 34; pneumonia, 403; diarrheal diseases, under 2 years, 51; influenza, 140; cancer, 143, and accidents and violence, 150. Comparing March with the preceding month, there was an increase of mortality from all the causes stated above, with the exception of diphtheria, which disease showed considerable decrease The mortality from influenza was nearly double that of the preceding month. The death rate was slightly higher than for March, 1902. There were 3 deaths reported from smallpox during the month, while 5 deaths were returned from this cause for February.

NEW YORK.

Medical Bequests.—The will of the late county judge, Hon. Henry T. Nason of Troy, devises $10,000 to Dr. E. D. Ferguson, in case of the predecease of his mother, and $25,000 in the event of the predecease of his mother and grandfather, and to the Samaritan Hospital, at the decease of his mother $10,000, and an additional amount which will bring the entire bequest up to about $80,000.

Elsberg Bill Killed.—It is alleged that because Senator Elsberg acted independently from the machine in state politics and as a matter of petty spite work and revenge, the machine has killed his bill for the abolition of coroners for Greater New York. The machine Republicans in the senate have disre-

garded the earnest demands of the citizens of Greater New York, and it is only a question of time when the bill must pass.

Opposition to Site for Tuberculosis Hospital.—Attorney-General Cunneen has been asked to institute proceedings to prevent the establishment of the State Hospital for Tuberculosis Raybrook, on the plea that it was highly objectionable to certain summer residents in the vicinity. Mr. Cunneen refused to bring such suit, and at about the same time the senate finance committee reported favorably on the appropriation of $115,000 for the support of the hospital at Raybrook.

New York City.

Without License.—Nicola D'Amato, an Italian of Brooklyn, was arrested, April 6, on the charge of practicing medicine without a license from the board of health. The warrant was issued by the registrar of vital statistics.

Loomis Lectures on Sanatoria.—Dr. Henry P. Loomis delivered a popular lecture in the United Charities Building on "Sanatoria and Climatic Influences in the Prevention of Tuberculosis," illustrating it with stereopticon views of the leading sanatoria.

Thousands for Gouverneur.—At the request of the president of the Board of Trustees of the Bellevue and Allied Hospitals, the issue of $125,000 corporate stock for the purpose of completing the construction of Gouverneur Hospital was granted by the board of estimate.

Mikulicz in New York.—Prof. von Mikulicz is in the city as the guest of Dr. Fred Kammerer. A dinner was given by Dr. Kammerer in his honor, and an opportunity was thus afforded of presenting the distinguished foreign surgeon to a number of eminent members of the local profession

Work of Throat Hospital.—The Metropolitan Throat Hospital, during a period of thirty years, has been the means of affording free medical assistance to a large class among the deserving poor of New York. According to its recently-issued report, 27,244 individuals have been received since its foundation, and a total of more than 218,364 visits have been made to its dispensary. During the last year, 1,307 patients were treated in the clinics.

Garnault Here.—Dr. Paul Garnault, the Paris physician who, in June, 1901, offered himself for experimentation in order to refute Koch's assertion that tuberculosis can not be transmitted from cattle to man, is now in New York. His object in coming here is to deliver a series of lectures on the evolution of Roman Catholicism. Speaking of the inoculation experiments made on him by three other physicians, and at the same time, as a control, on guinea pigs, he stated that in 25 days the guinea pigs developed tuberculosis, and died within two months, and that when examined in July by Dr. Roux, that savant declared that a local tuberculosis had been set up in Dr. Garnault. That the process did not become general is attributed to his vigorous health.

Buffalo.

Personal.—Dr. Charles G. Stockton is in California.——Dr. Charles Cary will spend several months in Europe——Dr. Augustus Pohlman has resumed his work as instructor in anatomy at Cornell University.

March Mortality.—The monthly report of the department of health for March shows a death rate of 15.91 per 1,000. The principal causes of death were as follows: Pulmonary consumption, 45; cerebrospinal fever, 4; diphtheria, 7; pertussis, 14; typhoid fever, 11; debility, 45; cancer, 24; apoplexy, 18; meningitis, 24; valvular heart disease, 28; pneumonia, 55; appendicitis, 7; cirrhosis of liver, 7; chronic nephritis, 12, and violence, 36. Total deaths 504, as compared to 520 in March, 1902.

PENNSYLVANIA.

Car Quarantined.—Smallpox on a Pullman car on an Erie train caused the car to be detached at Meadville and quarantined. The passengers were vaccinated.

The Typhoid Epidemic at South Bethlehem.—About 200 cases of typhoid fever have occurred during the winter at South Bethlehem. The epidemic is ascribed to impure drinking water. It has been proposed to place a filter in the Lehigh river, but a report on the proposed method, recently made by an expert, expressed disbelief in the filter proposed, and recommended the slow process of sand filtration as the only effective means of purification.

Additional Appropriations.—In addition to the appropriations to hospitals already mentioned in THE JOURNAL, the following appropriations were finally passed by the legislature: Home for the Friendless, $6,000; Temporary Home for the Aged, $3,000; Woods Run Industrial Home, $1,500, all of Allegheny; Home for the Aged, $4,000; Hayes Mechanics' Home, $3,000; German Hospital, $30,000; Orthopedic Hospital $31,000, all of Philadelphia; Corry Hospital, $7,000; Wilkesbarre Hospital, $38,000, and Harnot Hospital, $16,000.

Compulsory Report of Communicable Diseases.—A bill was passed by the legislature, and now awaits disposition by the governor, making it a misdemeanor for any physician or other person knowingly not to report, within ten hours, a case of smallpox, diphtheria, or scarlet fever, which may come to his knowledge, providing a fine of from $50 to $500, or imprisonment from ten days to six months, or both, and also making it compulsory on all cities, boroughs and townships to furnish quarantined persons medical aid, necessaries of life, etc.

Hospital for Feeble-Minded.—Among other bills in the hands of the governor, is one appropriating $50,000 for the selection of a site and the erection of a state institution for the feeble minded and epileptic, to be called "The Eastern Pennsylvania State Institution for the Feeble Minded and Epileptic;" and also a bill making it the duty of school directors, trustees or other persons having control of any school or college building, to adopt and immediately to put into operation a modern method and system of disinfection for school or college buildings.

To Suppress Smallpox.—The sum of $50,000 asked for by the state board of health has been appropriated by the legislature. The amount is largely to be used in the suppression of smallpox. Dr Wilmer R. Batt, quarantine officer at large, and his assistants, are at work in counties west of the Alleghenies, where the disease is epidemnic, establishing quarantine, enforcing vaccination and other measures for stamping it out. There are many centers of infection; in Tyler, Clearfield County, about 50 cases of smallpox were found, and no precautions had been taken to prevent the spread; the disease was found in about half a dozen villages, of which Houtzdale was the center; the whole district has been, for the present, quarantined. The disease is also prevalent east of the Alleghenies, in Lycoming, Bradford and Susquehanna Counties, where active preventive measures are being instituted. In Philadelphia and vicinity the disease is decreasing.

An Oil City Feast.—On April 15 the medical profession of Oil City gave a banquet in honor of Dr. Miles F. Porter, Fort Wayne, Ind., at which Drs. Roswell Park, Matthew D. Mann and Charles G. Stockton, Buffalo, N. Y., were guests of honor. Dr. Clarence W. Coulter was toastmaster, and Dr. John A. Ritchey delivered the address of welcome. The following toasts were responded to: "What's the Use," Dr. Miles F. Porter; "The Irregular Physician," Dr. William A. Nicholson, Franklin, Pa ; "Let Us Not Forget the Lessons of Past Years," Dr. Roswell Park; "The Regular Physician," Dr. John C. O'Day, Oil City; "Early Reminiscences of Gynecology," Dr. Matthew D. Mann, and "Status Presens," Dr. Charles G. Stockton. Dr. Roswell Park touched on the sad condition of affairs existing between New York and the National body, the American Medical Association. He expressed the earnest hope of seeing the difficulty completely removed and to see his own state harmoniously in line with the rest. Dr. Miles F. Porter said that, as a member and director of the association, he would do his mite toward effecting this end.

Philadelphia.

Public Health and Charities.—As authorized by act of the legislature, the city councils have created the new department of Public Health and Charities. It is stated on good authority that Dr. John V. Shoemaker will be director of the new department.

Pre-Nuptial Banquet.—On the evening of April 18 Dr. James M. Anders was given a dinner by his brother members of the faculty of the Medico-Chirurgical Medical College. The toasts, several in number, were with reference to the approaching marriage of Dr. Anders.

Poisoner Indicted.—Mrs. Catherine Danz has been indicted by the grand jury for the murder of her husband by the administration of poison, and George B. Hossey, the negro "herb doctor," was also indicted as an accessory to the crime, for furnishing the poison. Expert analysis of portions of Danz's body showed the presence of both arsenic and antimony.

Communicable Diseases.—A decrease has occurred in the number of new cases of typhoid fever and smallpox, but an

increase in diphtheria and scarlet fever. For the week ended April 18, there were, of typhoid fever, 160 new cases, as compared with 204 for the previous week; of smallpox, 10, as compared with 16 the previous week; of diphtheria, 78, as compared with 59 the previous week, and of scarlet fever 89, as compared with 70 the week before. There are under treatment in the Municipal Hospital 72 cases of diphtheria, 134 of scarlet fever, and 70 of smallpox. Nearly all the blame for the epidemic of typhoid fever may be ascribed to bad water. Of the 204 cases occurring during the week ended April 11, 67 were in a portion of West Philadelphia, where the residents receive most of the water supply by direct pumpage from the Schuylkill river.

GENERAL.

End of the Mazatlan Plague.—The city of Mazatlan, Mexico, has had no new cases of plague for some time and business has resumed its usual aspect.

Mikulicz Visits America.—Prof. J. Mikulicz, the famous Breslau surgeon, is visiting America. It is hoped that he will attend the New Orleans session.

Marine Hospital at Nome.—The United States Public Health and Marine-Hospital Service has established a hospital at Cape Nome, Alaska, and the hospital at Dutch Harbor will be discontinued.

Disinfection of Mail.—The postoffice department has issued a general order calling attention to the regulations governing the disinfection of mail matter, because of the prevalence of smallpox and other diseases in certain portions of the country.

Constabulary Medical Corps.—The Philippine Commission has provided for the appointment of three surgeons to the Insular Constabulary, and Drs. Winslow, Wheate and Baker have been appointed. They were formerly captains and surgeons of volunteers, and Dr. Winslow was prominent in the fight against cholera last year.

Recuperation Hospital in Philippines.—General Davis, U. S. A., commanding the Division of the Philippines, has arranged to have a large modern hospital erected near Mariveles at a level of about 3,000 feet. The special object is to provide a place where officers and men who are suffering from the effects of tropical climate may recuperate.

Personal.—Dr. H. C. Sloggett, Honolulu, founder of the Honolulu Eye and Ear Infirmary, former president of the Hawaiian Territorial Medical Association and former president of the Hawaiian Territorial Board of Health, has sailed for Shanghai, China, to become general manager and medical director of the Oriental Life Insurance Company.

Window Memorial for Physician.—A handsome memorial window has been placed in the Center church, Hartford, Conn., in memory of Dr. Horace Wells. The inscription credits him with being the discoverer of anesthesia. The service in the church in connection with the window was attended by the Hartford Medical Society and the Hartford Dental Society and by many physicians and dentists from other cities

The Army Medical School closed its sixth session April 14. The exercises were held in the hall of the National Museum. An address was delivered by John S. Billings, M.D, LL.D., deputy surgeon-general, retired. The diplomas were presented by the Hon. Elihu Root, secretary of war, and the Hoff memorial medal was presented by Gen. William H. Carter, U. S. A., of the War College board, to Assistant-Surgeon Harry L. Gilchrist for the highest average. This is the largest class graduated since the school was founded, in 1893, there being 38 graduates. Of this number the following were honor graduates, having an average of more than 90 per cent.: Harry L. Gilchrist, Samuel M. Deloffre, John W. Hanner and Edward M. Talbott. Most of these young medical officers have already been ordered to the Philippine Islands for duty. The following first lieutenants and assistant surgeons were the other graduates:

George H. R. Gosman, Reynold M. Kirby-Smith, William H. Moncrief, George L. Collins, Nelson Gapen, William T. Davis, Charles F. Morse, Samuel E. Lambert, Haywood S. Hansell, Junius C. Gregory, Jay W. Grissinger, Will L. Pyles, Thomas Devereux, William M. Smart, Robert H. Pierson, Cary A. Snoddy, Harry S. Purnell, Robert M. Blanchard, James Bourke, Louis C. Duncan, John A. Clark, Samuel J. Morris, Noel I. Barron, Jacob M. Coffin, Levy M. Hathaway, Alexander Murray, Philip W. Huntington, James D. Fife, William A. Powell, Leon T. LeWald, Jesse R. Harris, George H. Scott, Edwin D. Kilbourne, Robert L. Carswell.

U. S. Regional Death Summary.—The death map prepared by the Census Bureau shows some interesting facts as to the geographical distribution of diseases. For example, affections of the lungs are most common along the Atlantic coast from New York to Virginia and along the Mississippi River from Missouri to the Gulf. Typhoid fever and malaria are naturally rare in mountainous districts, but are at the head of the list in North and South Carolina, Georgia, Alabama, Mississippi, Arkansas and Indian Territory. Sensational deaths occur most frequently on the Pacific Coast. In the state of Washington gunshot wounds are a prevalent cause of death. On the Pacific Coast heart disease, suicide, apoplexy and alcoholism claim more victims than in other sections of the country. A general statement is made that three out of every 100 die of old age, but in a few districts old age is almost as important a cause of death as consumption or malaria. These places are the Catskills, Adirondacks, Green Mountain, parts of Michigan and Wisconsin and the region bordering on the Missouri River. In mountainous districts, cancer, heart disease and apoplexy are more common than on level ground. Croup and whooping cough appear to be most dangerous in the most thinly-settled districts As a general proposition, most deaths in the country are caused by climatic conditions, while those in cities are largely caused by social conditions. The map makes an interesting study for the physician.

FOREIGN.

Lannelongue Endowment at the Paris Academie des Sciences.—Professor Lannelongue has presented a fund to the Académie representing an annual income of $240.

French Hygienic Mission.—Dr. F. Gallard of Paris has been sent to this country by the minister of commerce and industry to study the hygiene of the working classes in the manufacturing centers here, from the double point of view of the professional environment and administrative assistance, that is, medical and hospital aid.

Agricultural School for Nervous Children.—Dr. Strohmayer, a prominent neurologist at Jena is director of an educational institution recently opened there for nervous and feeble-minded children. The raising of fruit, flowers and vegetables and forestry will be taught both theoretically and practically by teachers trained for the task.

Defective Acoustics in the New Paris Academie de Medicine.—The committee on remedying the defective acoustic properties of the new hall, recommend carpeting the hall, stretching threads across under the glass ceiling, substituting thinner panes of glass when any are broken, hanging tapestry or curtains along the walls and behind the platform, and curtaining off the boxes.

An Experiment in Switzerland.—The "Gazette Med. de Paris" states that Zurich is now debating a scheme to establish medical guardians of the public health. It is proposed to tax every individual over 18 at the rate of 80 cents a year. This will supply a sum sufficient to retain the services of forty physicians, who will watch over the maintenance of the health of the populace.

Milk Exposition at Hamburg.—In connection with the approaching Milk Exposition at Hamburg several works have been published dealing with the care of milk from various standpoints. The largest is entitled "Die Allgemeine Milchkunde," and contains everything known to date on the subject of milk and milk hygiene for the use of families, milk dealers, farmers, physicians and others.

Medical Censorship of Charlatans' Ads.—A German publishing house, A. Scherl, has officially applied to the German Medical Press Association with the request that it would pass judgment in dubious cases on the advertisements of applicants, whether they should be rejected as quack ads or not The association unanimously resolved to accept the proffered control and place their services at the command of the firm in the matter.

Prizes Awarded from the Pettenkofer Endowment.—A diploma and prize of $190 has been awarded by the committee in charge of this fund at Munich to three scientists. The first is Dr. Karl Flügge, director of the Institute of Hygiene at Breslau, as a token of appreciation of his works on formaldehyd disinfection and the transmission of phthisis by droplets expelled in sneezing, coughing and speaking. The second recipient is Dr. Dunbar, director of the similar institute at Hamburg, for his research on the so-called biologic cleansing process. The third is Dr. Ohlmüller of Berlin for his method of ozone purification of water.

Anti-Alcohol Congress.—The International Anti-Alcohol Congress opened in Bremen April 15. Secretary von Posadowsky-Wehner, in his opening address, said that the increased strain

due to the advance of civilization encourages the use of stimulants. Legislation is not the real remedy for the abuse of alcohol. Education of the people to a higher sense of morality is the remedy. Dr. Delbrueck, Bremen, was elected president. Professor Legrain of Paris, speaking on "Alcoholism and Tuberculosis," said that the use of alcohol predisposes the human system to tuberculosis, and also prevents the cure of it. Alcoholism intensifies the effect of diseases which create those conditions which are best fitted for the ravages of tuberculosis. Since the triumph over alcoholism, he continued, is approximately a triumph over tuberculosis, the real, individual and social treatment for tuberculosis consists in the strictest abstinence from alcoholic liquors. A lively discussion ensued.

The Battle of the Clubs.—The sick benefit societies at Stralsund surprised their medical officers, who had just resigned in a body, by granting their modest demands, and peace reigns once more. The physicians connected with the Mülhausen Kassen have recently asked for an increase of 16 per cent. over the present rates of 50 cents per capita and $1.50 per family. As the request was refused, they have all resigned. No change has occurred in the state of affairs at Gera, but our German exchanges still bear the display ad: "Physicians, do not go to Gera. Colleagues who are thinking of treating with the Textile Industries Kassen at Gera are requested to apply to Dr. Schrader, Gera, Reuss, or to Dr. Hartmann of Leipsic-Connewitz, president of the Leipziger Wirthschaftlicher Verband." The Verband mentioned is the "Union for Promoting the Material or Economic Interests of Physicians in Germany," to which we have often referred. It is stanchly supporting the physicians in their position. The Gera resignations were on purely ethical grounds, refusal to co-operate with a "nature healer" as a member of the medical staff on the same terms as the rest.

LONDON LETTER.

The Polyclinic.

The annual meeting was held on March 31. Sir W. Broadbent, the president, pointed out the gratifying progress of the institution, the number of members having risen from 825 in 1901 to 941 at present. A composite course of lectures on medicine and surgery has been organized and on payment of a fee of $5 a member may attend these lectures, one of which is delivered daily. The fee for non-members is $10. Many valuable additions have been made to the Hutchinson Museum and the whole collection has been so classified and arranged as to permit of speedy and easy reference. A companion catalogue has been published in the "Polyclinic." The financial report of the institution is not so satisfactory: the balance sheet for the year shows a deficiency of $2,000. The annual subscription of members ($5) and the fees charged for tutorial classes are not sufficient to meet the working expenses, and appeals to the charitable public for support have not been as successful as was hoped. They regard the institution as a doctor's affair and think it should be supported by the profession. As no hospital is attached, it does not appeal to their imagination. Sir W. Broadbent said that he never ceased to hope that, sooner or later, a properly equipped hospital would be acquired. A proposal was made to raise the annual subscription to $10.

Treatment of Trachoma by the X-Rays.

At the Ophthalmological Society Mr. M. S. Mayou, in describing this method, pointed out that with care the amount of reaction could be regulated. Even prolonged exposure of the globe to the *x*-rays was attended only by such trifling bad results as falling out of the lashes and conjunctivitis. Experiments on rabbits and frogs showed that the *x*-rays did not bleach the visual purple. The technic of the treatment consisted in everting the eyelids (the operator's hands being protected with bismuth ointment and cotton gloves), the cornea was exposed only when severe pannus was present. The infiltration set up caused difficulty in deciding when treatment should cease. The advantages of the treatment are: (1) less resultant deformity, (2) painlessness, (3) more thorough clearing of pannus.

Mr. Hutchinson on the Plague in India.

While engaged in his tour of investigation of leprosy in India, Mr. Hutchinson, as might have been expected, has found many subjects which have engaged the attention of his versatile intellect. Writing from the town of Amritzur, in which in the past week 731 persons had died out of 1,076 suffering from plague, he comments on the remarkable absence of anything like panic in the cities of India. In Lahore, the city which he had just left, the mortality was 390 out of 833 cases. The little town of Taran-tara, with a population of 4,000, a resort of pilgrims, he found comparatively deserted, its narrow streets closed and marked with a long bar of white paint, showing that deaths from plague had occurred in them. In many instances whole families had been carried off; the mortality was 95 per cent. Yet business was going on as usual, and a long string of pilgrims on foot, in carriages, or mounted on camels was passing through its narrow streets. The procession was miles in length, and had very properly been forbidden by the government, but the authorities were not strong enough to prevent it The natives are absolutely careless as to precautions, though willing enough to run out of a house in which the disease occurs. Mr. Hutchinson fears that the disease will soon have established itself over the whole of India. Isolation is impossible. The natives will not permit removal of their relatives and often will not seek skilled advice. When several cases have occurred in a house they take alarm and desert the patients, leaving the burial and disinfection to be done by others, but they will give no assistance to measures of precaution. Their religious principles prevent them from killing rats or being in any way accessory to their death. They will catch them alive in traps, take them a distance and let them loose, not improbably in some one else's garden. In order to meet the prejudices of the natives rewards are offered for live rats, which are fed and housed. At Amritzur they are kept in a large room with a stone floor and fenced with wire and liberally fed. But the confinement and inability to burrow does not suit them and they soon die. The inhabitants of the district object to this "rats' hell" in their midst, and another site will have to be found. The physicians and other Europeans exposed to the plague have received prophylactic injections of serum. The results are painful, and a severe rigor, temperature of 104, and distressing lassitude follow. In the natives the reaction is less severe. Great confidence is placed by the physicians in the efficiency of the injections, as well as in the use of immunized blood serum in the treatment of the disease.

Tetanus After the Subcutaneous Injection of Plague Serum.

The natives require much persuasion to submit to prophylactic injections of serum, and the lamentable accident which occurred last November and which we have described (THE JOURNAL, January 31), was eagerly published by the native press and did much to confirm their prejudices. The following are additional particulars: Nineteen healthy young natives were injected on the same occasion from a bottle of Haffkine's fluid All developed symptoms of acute tetanus on the fifth day, and died within a few days. Other bottles in the same consignment were innocuous. The operator was well skilled and careful and all the usual precautions were observed. In the district tetanus is common. Hence contamination probably took place on the spot. Perhaps it resulted from the syringe and not from the fluid.

Correspondence.

The Mosquito as a Carrier of Disease.

VERA CRUZ, MEXICO, April 12, 1903.

To the Editor:—In THE JOURNAL, April 4, appears an article by Dr. J. Stebbins King on "The Mosquito as a Carrier of Disease." In this article Dr. King makes the following statements:

1. . . . Hundreds of non-immunes are bitten every year by infected culex mosquitoes where yellow fever exists as an epidemic and do not take the disease."

2. . . . Non-immunes can be exposed for days and months to yellow fever, and that, too, in the presence of infected culex mosquitoes, and not take the disease. . . .

3. The Doctor does not so state, but implies, that the mosquito is not the only means of transmitting yellow fever.

4. The writer, ... can most positively vouch for the truth of every statement here made [in his article].

In reply to these four statements, it is well to mention the fact that it is impossible to prove whether a mosquito is infected with yellow fever or not without trying to inoculate a non-immune with the suspected insect. No microscopic or bacteriologic examination is of the least value, as nothing has been found in the infected insects that is of the least diagnostic importance. Unless the Doctor had control of the mosquitoes and tried them out on the non-immunes he can hardly vouch for the truth of his first statement.

In regard to his second statement, it is absolutely false, so far as the non-immunes being exposed to infected culex mosquitoes. Drs. Reed, Carroll and Agramonte demonstrated beyond a doubt that infected mosquitoes would infect non-immunes, and the same thing has been further demonstrated here in Vera Cruz. If there are any non-immune doubters that have to be shown this fact and have an infected insect feed on them, they can be accommodated at any time. The reason why non-immunes can be in constant attendance on yellow fever patients and not contract the disease is only explained by the mosquito transmission theory. The mosquito can not transmit the disease until ten or twelve days after biting the infected patient. In that time the patient is convalescent, the room disinfected and aired and, in all probability, the infected insects killed or driven over to the neighbor's house.

It is very probable also that the patient is covered with a mosquito bar and the nurse, through human instinct, exterminates all mosquitoes in sight.

As to the third statement, the Doctor only implies that there is some other means of carrying the infection, yet does not advance either a fact or theory as to the means. I have seen yellow fever produced by the mosquito inoculation and also by the injection of blood from a person suffering from the disease into a non-immune. I have seen yellow fever fail to develop in three non-immunes who were confined in a mosquito-proof room with a man suffering from a severe case of yellow fever, and who remained in the room throughout a period of four weeks. I have had numerous cases during the past year in which non-immunes nursed yellow fever cases and did not contract the disease, and the only precaution taken was to screen the room and keep the patient under a good mosquito net. I had one case in which a mother nursed a 2-months-old baby during the first four days of her attack of yellow fever—and only ceased because the secretion of milk stopped—the child staying in the bed with its mother throughout the whole course of the disease, yet did not contract yellow fever, the room being entirely free from mosquitoes. The experiment was tried here of giving to a non-immune, whose stomach had been previously emptied, twenty-three infected mosquitoes in a capsule, without any effect whatever.

The complete extermination of the fever in Havana through the destruction of the stegomyia should carry some weight with the thinkers, and such an article as that written by Dr. King can only cause doubt in the minds of men who are not acquainted with the facts in the case.

If Dr. King or anybody else has any theory, fact or suggestion as to any other means of transmitting yellow fever, they will confer a favor by making it known, as there are many men in yellow fever communities and elsewhere who would gladly demonstrate the truthfulness of such a theory or suggestion. The Mexican government, the Marine-Hospital Service and the state boards of Alabama, Louisiana and Texas have accepted as proven the mosquito transmission theory, and their quarantine laws are based on this fact.

Let those who doubt refrain from publishing assertions until they can prove one little fact about their other means of propagating the disease, for such articles only produce doubt in the minds of those living within the infectible territory of the United States, and cast reflections on the work of the best men in charge of our quarantine system.

SAMUEL H. HODGSON, M.D.,
Acting Assistant Surgeon, U. S. Marine-Hospital and Public Health Service. Last six years residing and practicing in a yellow fever epidemic.

Typhoid Perforation Data Wanted.

NASHVILLE, TENN., April 17, 1903.

To the Editor:—I desire to request any surgeon who has operated for intestinal perforation or peritonitis in typhoid fever, to send me the data of the cases and reference, if they have been published, under the following heads: Age. Sex. Severity of the fever. Symptoms of perforation. Abdominal signs. Date of disease when perforation occurs. Length of time after perforation before operation. Leucocytosis (if any tests). Description of findings at operation. Site of perforation. Result. Remarks.

I have collected 261 cases in the literature, and feel sure that many more have remained unfound or unreported. For the purpose of a complete statistical investigation of this important surgical problem, I respectfully request the above reports at as early a date as possible. W. D. HAGGARD.

Marriages.

T. E. MCMURTREY, M.D., to Miss Grace Polglase, both of Chicago, April 15.

HERMAN D. PETERSON, M.D., to Miss Marie Freeman, both of Chicago, April 20.

LEIGHTON P. ALLEN, M.D., to Miss Frances Ideson, both of Oshkosh, Wis., April 15

DANIEL W. ROGERS, M.D., Chicago, to Miss Helen S. Wainwright, at Chicago, April 14.

JAMES LANG LEWIS, M.D., Lawton, Okla., to Miss Elizabeth Shaw of Chicago, at Joliet, Ill., April 21.

GUY B. VAN ZANDT, M.D., Montrose, Ill., to Miss Lucille Cuddy of Allan Reed, Texas, at St. Louis, Mo., April 9.

Deaths.

Isaac W. Fink, M.D. St. Louis Medical College, 1854, a member of the American Medical Association, Mississippi Valley Medical Association, Illinois State Medical Society, Central Illinois Medical Society and for several years president of the Montgomery County Medical Society, died at his home in Hillsboro, Ill., April 14, from paralysis, after an illness of seven months, aged 78.

Edmund Ludlow, M.D. Northwestern University Medical School, Chicago, 1895, formerly interne at St. Luke's Hospital, Chicago, and at the Central Indiana Hospital for the Insane, Indianapolis, who left his home in Paxton, Ill., in search of health, going first to Silverton, Colo., and then to Los Angeles, died in the latter city, April 5.

William S. Whitwell, M.D. Harvard University Medical School, Boston, 1872, of New York City, a member of the American Medical Association, died at the Riverview Sanitarium, Fishkill Landing, of which he was proprietor, from Bright's disease, April 8, aged 57.

Hugo Lupinski, M.D. University of Michigan, Ann Arbor, 1882, a member of the American Medical Association, for several years health officer of Grand Rapids, Mich., died at his home in that city, April 7, after an illness of two weeks, aged 44.

George W. Westlake, M.D. Medical College of Ohio, Cincinnati, 1866, a member of the American Medical Association, coroner and public administrator of Tehama County, Cal., died suddenly from heart disease in his office at Red Bluff, April 4, aged 59.

William M. Carothers, M.D. University of Pennsylvania, Philadelphia, 1890, of Braddock, Pa., died, April 12, at the Western Pennsylvania Hospital, Dixmont, from organic disease of the heart after a prolonged illness, aged 45.

Isaac S. Tanner, M.D. New York University, 1845, a surgeon in the Confederate service during the Civil War, and a resident of Shepherdstown, W. V., for more than half a century, died at his home, April 9, from paralysis, aged 85.

Bernard Stuve, M.D. Ohio Medical College, Cincinnati, 1851, who retired from practice in 1868 to practice law, died at his home in Springfield, Ill., April 11, from disease of the stomach, after an illness of a year, aged 73.

Gustave E. Sussdorff, M.D. Long Island College Hospital, Brooklyn, N. Y., 1866, of San Francisco, died at St. Mary's Hospital in that city from pneumonia, April 4, after an illness of one day, aged 60.

Hobart Cheesman, M.D. New York University, 1878, for the last twenty years one of the chief examiners of the Equitable Life Assurance Society, died at St. Luke's Hospital, New York, April 11, aged 58.

H. N. Coomer, M.D., of Ashley, Ohio, who had practiced for more than forty years in that locality, and had been for seven

years past health officer of Ashley, died, after a long illness, April 1, aged 70.

Samuel **P. Timmons, M.D.** University of Louisville, 1896, who was compelled to move from Louisville to Texas a year ago on account of failing health, died at Graham, Texas, April 6, aged 35.

William **A. Durrie, M.D.** Yale Medical School, New Haven, Conn., 1846, of East Orange, N. J., who retired from active practice in 1884, died at his home, April 8, after a short illness, aged 81.

H. Cushman, **M.D.**, of Stromburg, Neb., a member of the American Medical Association, died at his home, April 8, from pneumonia, after an illness of four days, aged 65.

L. Gideon **Archambault, M.D.** Ecole de Medecine et de Chirurgie, Montreal, P. Q., 1869, died at his home in Woonsocket, R. I., April 8, from diabetes, after a long illness.

Guy Bryan **Miller, M.D.** College of Physicians and Surgeons, New York, 1898, formerly house physician at St. Luke's Hospital, died in Paris, France, April 7, aged 30.

George **M. Silvers, M.D.** College of Physicians and Surgeons, New York, 1878, died at his home in Chicago, April 15, from pneumonia, after a brief illness, aged 43.

Chauncey **Ayres, M.D.** Yale Medical School, New Haven, 1831, the oldest alumnus of that institution, died at his home in Stamford, Conn., April 14, aged 95.

Henry **D. Kerfoot, M.D.** Bellevue Hospital Medical College, New York, 1870, died at his home in Berryville, Va., April 9, after a protracted illness, aged 57.

J. C. **Stone, M.D.** Georgia College of Eclectic Medicine and Surgery, Atlanta, 1890, of Madison, Ga., died in a sanatorium at Atlanta, March 30, aged 38.

James **D. Craig, M.D.** Hygeio-Therapeutic College, New York, 1858, died at his home in Rogers Park, Chicago, April 13, from pneumonia, aged 70.

John **A. Evans, M.D.** Missouri Medical College, St. Louis, 1882, died at his home in High Hill, Mo., April 8, from disease of the stomach, aged 41.

T. W. Keith, M.D. Memphis, 1902, died at his home in Downing, Texas, from pneumonia, April 14, after an illness of six days, aged 36.

William H. Curry, M.D. University of Maryland, Baltimore, 1866, died suddenly at Baltimore, April 10, from heart disease, aged 61.

Thomas S. Jones, M.D. University of Pennsylvania, Philadelphia, 1868, died recently at his home in Shelbyville, Ind., aged 60.

Joel **J. Walker, M.D.** Louisville Medical College, 1878, died at his home in Hot Springs, Ark., April 9, after a prolonged illness.

Anna T. Mills, M.D. Woman's Medical College, Chicago, 1882, died from pneumonia at her home in Vinita, I. T., March 16.

Hugh **Marshall, M.D.** Rush Medical College, Chicago, 1852, died at his home in Monmouth, Ill., April 11, aged 77.

Charles **A. Wunsch, M.D.** Cleveland Medical College, 1867, died at his home in Saranac, Mich., April 8, aged 77.

James **M. Tomlinson, M.D.**, Paris, France, died at his home in Indianapolis, April 9, from apoplexy, aged 81.

L. M. Bray, M.D., Toone, Tenn., died suddenly from apoplexy at his home, April 11, aged 75.

N. P. Givens, M.D., of Bowie, Texas, died April 5, aged 60.

Deaths Abroad.

Thomas **Maclagan, M.D.**, who died recently, was, like many men who had attained eminence in the practice of medicine in England, a Scotchman. Though not on the staff of any hospital and, therefore, not a consultant in the ordinary sense, he had a very high-class practice. One of his patients was Thomas Carlyle. His success depended entirely on his sterling qualities. According to Sir F. Treves, "He was one of the most successful practitioners in London. He knew his work; he was one of the kindest and most sympathetic of men; he was rigidly upright and punctiliously honest." His salicylate treatment of rheumatism first brought him into prominence with his professional brethren. As long ago as 1876 he wrote what is curiously in accord with the most recent pathology: "Rheumatic fever is regarded as being produced by some cause or agency generated within the body. My investigations have led me to reject this view and to adopt the old 'miasmatic' view, according to which the cause is introduced from without." As the cinchonaceæ grow plentifully in malarious regions, he argued that possibly some plant which grew plentifully in regions where the rheumatic miasm prevailed would prove effective, and was led to try the salicaceæ. Decoction of willow-bark had been known as a cure for rheumatism long before, but in modern times Dr. Maclagan was the first to point out the value of salicin, which later was supplanted by the salicylates.——**Luciano Armanni, M.D.** University of Naples, 1861, professor of pathologic histology in the University of Naples, founder and director of the institute of pathologic anatomy connected with the Hospital for Incurables, died, after a long and painful illness, from disease of the lungs, March 15, aged 64.——**Emma Constance Stone-Jones,** L. S. A., London, 1889; M.D. and Ch.M., Trinity College, Toronto, died recently at her home in Melbourne, Australia, aged 46.——**B. Von Kahlden,** professor of pathologic anatomy at Freiburg, died recently from apoplexy.

Book Notices.

THE DISEASES OF WARM COUNTRIES. A Handbook for Medical Men. By Dr. B. Scheube, State Physician and Sanitary Adviser, Greiz. Translated from the German by Pauline Falcke, with Addenda on Yellow Fever, by James Cantlie, M.B., F.R.C.S.; and on Malaria, by C. W. Daniels, M.B., M.R.C.S. Edited by James Cantlie, M.A., M.B., F.R.C.S., D.P.H., Lecturer at the London School of Tropical Medicine. With All the Original Colored Maps, Charts, Illustrations, Etc., Together with Many Additional Plates, from the *Journal of Tropical Medicine*. Second Edition, Revised. Cloth. Pp. 594. Price, $8.00 net. Philadelphia: P. Blakiston's Son & Co. 1903.

This translation of Scheube's work is a valuable accession to the medical literature of the English language. It has had but one predecessor on the subject, and that is the comparatively small work by Manson. This is decidedly the more valuable work. Of course, the text is a little behind the times, but that has, to a certain extent, been made up by the addenda to the chapters on some subjects and in which a brief summary of the chief recent advances in our knowledge of malaria and yellow fever is given. A specially valuable feature of the work is its bibliographies, which brings the literature up to within a comparatively few years. It would have been better had the book been revised and annotated instead of merely translated, and we hope that in future editions this will be done. With a thoroughly detailed editing we know of no work that would be its superior and but few that are to be compared with it on its special subjects. The translation has been well done.

DISEASES OF WOMEN. A Clinical Guide to Their Diagnosis and Treatment. By George Ernest Herman, M.B. Lond., F.R.C.P., Obstetric Physician to and Lecturer on Midwifery at the London Hospital. With Upwards of 250 Illustrations. Revised Edition. Cloth. Pp. 884. Price, $5.00 net. New York: Wm. Wood & Co. 1903.

The object of the present volume, the author says, is to furnish a convenient manual for the student and practitioner and not a manual of reference for the specialist. It seems to us that Dr. Herman has succeeded very well in his purpose. He says he thinks he has one qualification for writing such a book, viz., clinical experience. That is certainly an important qualification. While the book is not strictly original in its treatment of the subject, it seems to be the result of good observation and, as might be expected from the preface, is not overloaded with references to the literature or quotations from other authorities. There is nothing specially novel in its classification. The illustrations are schematic, but generally excellent for the purpose; we believe that schematic illustrations are, as a whole, better for the student than the elaborate attempts at reproducing actual conditions and anatomic structures. There is not the reference to American authors and their work that one would look for, and some valuable contributions to gynecologic technic, etc., by American authors are not mentioned.

HARRINGTON'S HYGIENE. A Manual of Practical Hygiene for Students, Physicians and Health Officers. By Charles Harrington, M.D., Assistant Professor of Hygiene in the Medical School of Harvard University. Second Edition. Revised and Enlarged. With 113 Engravings and 12 Full-Page Plates in Colors and Monochrome. Cloth. Pp. 755. Price, $4.25 net. Philadelphia and New York: Lea Brothers & Co.

It is not long since we noticed the first edition of this work. The second appears with some valuable additions and a general

revision The principal additional matter is a chapter on the relation of insects to human diseases, a subject which has come very much to the fore within the last few years. The author's statements on the harmlessness of liqueurs or cordials, with the exception of absinthe, is not in accord with the latest French pronouncement on the subject, which, we think, must be based on as full testimony and study as any that the author has given to it. Aside from their alcoholic content, if we are not mistaken, liqueurs are declared by French authority to be decidedly harmful in themselves. Taken as a whole the book, we think, will maintain the popularity the former edition has received.

THE AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY FOR 1903. A Yearly Digest of Scientific Progress and Authoritative Opinions in All Branches of Medicine and Surgery, Drawn from Journals, Monographs, and Text-Books of the Leading American and Foreign Authors and Investigators. Arranged, with Critical Editorial Comments, by Eminent American Specialists, Under the Editorial Charge of George M. Gould, A.M., M.D. In Two Volumes. Volume I, Medicine. Volume II, General Surgery. Cloth. Price, per volume, $3.00 net. Pp. 691 and 670 Respectively. Fully Illustrated. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

This year-book keeps up its reputation and gives an excellent résumé of the leading literature in the different departments of medicine and surgery. It holds a high place among the various other compendiums in this line. The illustrations are excellent and add largely to the value of the books, which, so far as we have been able to examine, are trustworthy and full.

Miscellany.

In poisoning by morphin or by coal gas, remember the value of the abstraction of blood followed by saline infusion. In severe cases the addition of this measure to the others employed may be sufficient to save the life.

For Medical Writers.—Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest words possible, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—Ruskin.

Treatment of Gonorrhea Based on the Biologic Properties of the Gonococcus.—V. Schultz contributes to the "St. Petersb. Med. Woch." an article on this subject. He first establishes that the organism seeks to repel the invasion of the gonococci by filling up and obstructing with leucocytes the openings in the mucous membrane attacked and the lymphatics, thus localizing the infection. The cocci find in the leucocytes a nutrient medium peculiarly rich in peptone and in their proliferation in it they generate a toxin which in turn checks their own development. The infection is also blocked by early regeneration and metaplasia of the cellular tissue of the mucosa and the cocci are eliminated in the dead cells thrown off by the tissues. A fifth factor in the struggle of the organism is the febrile temperature, which probably has also an inhibiting influence. He cites authorities to the effect that the toxin generated by the cocci has an injurious influence on the nerves of the region, affecting in time portions of the entire central nervous system. Generally speaking, the columnar epithelium opposes the weakest and the pavement the strongest resistance to the invasion. On account of the penetrating power of the cocci, it is impossible to eradicate them mechanically or chemically unless the entire mucosa down into the submucous layers could be scraped off with them. The sole and entire reliance is, therefore, on the natural processes of defense. They must be promoted in every possible way. As aids in this line, he insists on entire avoidance of all excitement or stimulation of the region, sexual and menstrual. He packs the vagina of his female patients, and forbids them to remove the tampon. He also aims to induce a temporary menopause by intrauterine injections of iodin-alcohol, as recommended by Mackenrodt, Walton and others, or Sänger's method of applying the iodin-alcohol (Volkmann's Sammlung klin. Vorträge, 1890, 1894, 45 and 18, and Cbl. f. Gyn., 1894, 25). To rest the parts as much as possible, he orders his patients to stay in bed during the acute stage or an acute relapse. This is particularly essential during the menstruating period. Food, intestinal functions, etc, must be appropriately regulated, but the local process must be left entirely undisturbed, no instruments, disinfectants or local applications of any kind allowed. The seventh factor in his treatment is simultaneous treatment of the woman's husband if gonococci are discovered in his secretions. A great advantage would be gained if we could devise some way of inducing a local leucocytosis and febrile temperature to enhance the natural processes. Dehio has accomplished this in lupus patients by subcutaneous injection of extracts of the proteins of the prodigiosus and cyaneus bacilli.

A Sensible Veto.—The osteopaths had a vigorous lobby in Salt Lake City this winter, working for a law providing for licensing them to practice in the state on filing a certificate, without undergoing an examination, as is necessary for physicians. They succeeded in getting the bill passed, but it was vetoed by the governor, and failed to pass over the veto The following is Governor Wells' veto message, which we believe is worthy of space in our columns:

VETO OF OSTEOPATH BILL BY GOVERNOR HEBER M. WELLS, OF UTAH, MARCH 16, 1903.

TO THE SENATE:

I herewith return without my approval Senate Bill No. 131, entitled "An Act declaring the practice of osteopathy not to be the practice of medicine and surgery within the meaning of title 52, revised statutes of Utah, 1898, and regulating the practice of osteopathy in the State of Utah."

The saving of human life, whether by means of looking to the prevention of disease or by means calculated to cure disease already established, will be admitted without question to be the proper climax of professional ambition as well as the highest humanitarian desire of legislative enactment. In both these directions the state of Utah, by vigorous sanitary laws and by strict requirements as to the quality of medical practitioners, stands well in the forefront of enlightened and progressive commonwealths.

Only through conviction should we venture to weaken in any degree these safeguards which experience and observation have proven to be beneficent and satisfactory.

PRACTICE OF MEDICINE.

Whatever the term or nature of the tenets of the particular school which this bill aims to recognize, its practice must, it seems to me, be considered a branch of the science of medicine. After all, the physician, of whatever school or designation, has to deal with the same physiology, the same conditions, the same laws of cause and effect in health and disease. All practitioners may not have the same knowledge and the same skill, yet our statutes have wisely provided as a matter of public policy and protection, that a certain amount of skilled knowledge all of them must have.

It requires considerable honesty in any practitioner to admit that a case in hand is beyond his powers. His training may be limited, his pretentions modest; but the consequences of his weakness in refusing to concede it are equally dangerous. The natural treatment of any physical disorder is necessarily determined by a diagnosis of a case—a preliminary of first and absolute importance. To do the wrong thing by performing dangerous manipulations, or to do nothing at all—either of which courses is easily open to the unskilled—may be equally fatal. The peril is not lessened if the physician, perhaps by happy accident or coincidence, has discovered the true condition.

HUMAN LIFE PRECIOUS.

He may be manly enough to confess inability to suggest proper remedies, or reckless enough to attempt treatment of his own altogether without reason or applicability, or indifferent enough, as already suggested, to do nothing at all. In either case the patient suffers the risk. Is not human life too precious to be thus trifled with?

The foregoing suggests that the treatment of disease should not be permitted to be a matter of mere experiment; and inasmuch as the authority to practice presupposed an acquaintance with the science as recognized by all the regular schools, any knowledge short of that should be deemed insufficient. I consider it unfair and dangerous, therefore, to allow the adherents of osteopathy or of any other school to practice without undergoing the ordinary tests to which other practitioners have to submit. The specialist may go so far as his talents and inclination may carry him, and the public be benefited by his advancement, but the fundamental and essential knowledge which every physician ought to have can not safely be waived or ignored.

SAFEGUARDS SWEPT AWAY.

Science is progressive; advancement can not be stayed, in the art of healing least of all; and the dogmatism of disputants, whether in medicine or anything else, must soon yield to the light of truth and reason. Whatever merit osteopathy may have will assuredly find recognition. The present contention is that in the bill before me the necessary requirements and safeguards with which the law surrounds the physically afflicted are thrown down and swept away. To this I am unwilling to consent. No practitioner of this school who possesses the qualifications required of the practitioners of other schools needs such a law. I deem it unwise to enact it for the benefit of those who have not those qualifications. Whenever all who seek to engage in the healing art shall be equally recognized as competent under the regulations now generally established, one medical law will be sufficient. This condition complied with it would give me sincere pleasure to name as a member of our state board of medical examiners an adherent of the very school in whose behalf this piece of legislation is proposed.

HEBER M. WELLS, Governor.

State Boards of Registration.

The New Oklahoma Law.—The recent Oklahoma legislature passed a new law regulating medical practice in that territory. It provides for a territorial board of health, consisting of three reputable physicians appointed by the governor, one of whom is to be a salaried official with the designation of superintendent and to be ex-officio the secretary. The law provides that the board shall meet every three months, due notice of time and place having been given. Aside from its other duties as a board of health, the board is to examine applications and grant licenses to practice medicine, and the act specifies the following conditions:

SECTION 5. No person hereafter shall practice medicine or surgery in this territory without first obtaining a license from the territorial board of health. Application for license shall be made in writing, together with a fee of $5, accompanied by a proof of good moral character, and proof of ten years' continuous practice, or proof of graduation from a reputable medical college. When the application has been inspected by the board and found to comply with the foregoing provisions, the board shall notify the applicant to appear for examination at a time and place designated in such notice. Examination shall be made in whole or in part in writing and be sufficiently strict to test the applicant's qualifications to practice medicine. All members of the board shall be present and participate in such examination. It shall be the duty of the person holding such license to register in the office of the register of deeds, in a book kept for that purpose, in the county in which person resides or intends to practice. Provided, that an osteopath shall not be required to pass an examination in materia medica or therapeutics.

SEC. 6. Any person practicing or offering to practice medicine or surgery in any of their branches, without first having obtained a license from this board, shall be deemed guilty of a misdemeanor and, on conviction thereof, shall be fined in any sum not less than $50 nor more than $100, or by imprisonment in the county jail for a period of not less than thirty days nor more than six months, or by both such fine and imprisonment at the discretion of the court, and all costs incurred therein.

SEC. 7. The provisions of this act shall not affect the rights of persons now legally practicing medicine, osteopathy or surgery in this territory; nor shall it prohibit the application of domestic remedies by one member of a family to another thereof; nor administering of remedies by another in case of emergency, without compensation; nor shall it apply to any commissioned medical officer of the United States army, navy or marine-hospital service, in the discharge of his official duties; nor to any legal qualified dentist, when engaged exclusively in the practice of dentistry; nor to any physician or surgeon from another state or territory who is a legal practitioner of medicine or surgery in the state or territory in which he resides, when in actual consultation with a legal practitioner of this territory; nor to any physician or surgeon residing on the border of a neighboring state or territory and duly authorized under the law thereof to practice medicine or surgery therein, whose practice extends into the limits of this territory: Provided, that such practitioner shall not open an office or appoint a place to meet patients or receive calls within the limits of this territory; nor to any osteopath who shall pass examination in the subject of anatomy, physiology, obstetrics and physical diagnosis in the same manner as required of other applicants before the territorial board of health, and who has thereupon received a certificate from the board which, when filed with the register of deeds, as is required in the case of other certificates from the board, shall authorize the holder thereof to practice osteopathy in the territory of Oklahoma, but shall not permit him to administer drugs nor to perform major surgery.

Association News.

THE SESSION AT NEW ORLEANS.

MORE ANNOUNCEMENTS CONCERNING THE FIFTY-FOURTH ANNUAL SESSION.

Full particulars of the rates and routes to New Orleans were given in the New Orleans Number, April 11.

Another special train is announced. The Chesapeake & Ohio Railroad special will leave New York at 4:55 p. m., Saturday, May 2, pass through Philadelphia and Washington and arrive at Hot Springs, Va., the next morning. The day will be spent there, the physicians being the guests of Mr. Fred Sterry, manager of the Homestead Hotel. Leaving Hot Springs Sunday night, the party will proceed to Louisville, where it will join other excursions on the Illinois Central. Those desiring to join this party should communicate with the agents of the road.

The Cuba Excursion.

A correspondent asks for further information concerning the trip from New Orleans to Cuba. He says: "Will you kindly state: 1, The time of arriving at Cuba; 2, if one may stay over one week and take steamer back on its second trip; 3, if $50 includes board and berth while on boat."

To this we answer: 1. Boats leaving New Orleans every Saturday arrive at Havana Monday, and leaving Havana Tuesday arrive at New Orleans Thursday. All schedules are subject to change, of course. 2. Yes, or two weeks, provided that will allow you to return home within the limit of your railroad ticket, May 30. Remember to extend your railroad ticket at New Orleans on or before May 12. 3. Yes.

Stomatology Meeting Place.

The meetings of the Section on Stomatology will be held in Touro Synagogue, Carondelet street, near St. Joseph street, instead of the location first announced.

Value Not Measured by Dollars and Cents.

The editor of "Merck's Archives" says that "any physician to whom it is at all possible should make the most strenuous effort to attend the meeting of the American Medical Association; the benefits derived from attending the meetings can not be figured out in dollars and cents; but the broadening of the intellect that comes from association with the best men of the profession from all parts of the country, the knowledge that one gains from listening to the papers and to the discussions, the acquaintances one makes, the social features and entertainments, the freedom from care and worry for a few days, and the change from the humdrum life of the average practitioner—all these factors are infinitely superior to dollars and cents, because they make the man a better physician and the physician a better man. So do your best to be at New Orleans on the date named. It is only one fare for the round trip."

Reception of Special Trains at New Orleans.

Those having charge of special trains to the New Orleans meeting of the American Medical Association are asked to notify the Chairman of the Bureau of Information, Dr. A. G. Friedrich, 841 St. Charles street, New Orleans, as to where the special train will be from and at what time it will reach New Orleans. Such information should be sent by letter immediately, and also a telegram should be sent a few hours before the special reaches New Orleans, giving the expected time of arrival as near as possible.

House of Delegates.

The House of Delegates will be made up of the following delegates so far as we are advised. Those states not named have not appointed their delegates or have not sent in the names. Several states will be entitled to a larger representation than last year.

Arkansas—Dr. J. A. Dibrell, Little Rock.
California—Dr. H. Bert Ellis, Los Angeles.
Colorado—Dr. C. K. Fleming, Denver.
Connecticut—Dr. C. S. Rodman, Waterbury; Dr. C. E. Brayton, Stonington.
District of Columbia—Dr. George M. Kober.
Florida—Dr. R. D. Murray, Key West.
Indian Territory—Dr. B. F. Fortner, Vinita.
Indiana—Dr. W. N. Wishard, Indianapolis; Dr. D. C. Peyton, Jeffersonville.
Iowa—Dr. J. R. Guthrie, Dubuque; Dr. Samuel Bailey, Mt. Ayr.
Kansas—Dr. J. E. Minney, Topeka.
Kentucky—Dr. J. N. McCormack, Bowling Green; Dr. Thomas Hunt Stucky, Louisville.
Louisiana—Dr. Rudolph Matas, New Orleans.
Massachusetts—Dr. W. N. Swift, New Bedford; Dr. A. G. Minshall, Northampton; Dr. B. H. Hartwell, Ayer. Dr. W. T. Councilman, Boston; Dr. J. C. Warren, Boston; Dr. H. E. Marion, Brighton.
Michigan—Dr. H. O. Walker, Detroit; Dr. T. A. Felch, Ann Arbor; Dr. J. B. Griswold, Grand Rapids.
Minnesota—Dr. A. W. Abbott, Minneapolis; Dr. Wm. Davis, St. Paul.
Missouri—Dr. F. J. Lutz, St. Louis.
Montana—Dr. T. J. Murray, Butte.
New Hampshire—Dr. Ira J. Prouty, Keene.
New Jersey—Dr. Chas. J. Kipp, Newark; Dr. Elias J. Marsh, Paterson; Dr. L. M. Halsey, Williamstown.
North Carolina—Dr. E. C. Laird, Hot Springs; Dr. E. B. Glenn, Asheville.
Oklahoma—
Oregon—Dr. Andrew C. Smith, Portland.
Pennsylvania—Dr. William T. Bishop, Harrisburg; Dr. H. S. McConnel, New Brighton; Dr. John B. Roberts, Philadelphia; Dr. Wm. M. Welch, Philadelphia; Dr. Wm. S. Foster, Pittsburg; Dr. Geo. W. Guthrie, Wilkesbarre; Dr. Alem P. Hull, Montgomery; Dr. W. B. Lowman, Johnstown.
Rhode Island—Dr. John Champlin, Westerly; Dr. Frederick T. Rogers, Providence.
South Dakota—Dr. J. L. Stewart, Irene.
Tennessee—Dr. Dan'l E. Nelson, Chattanooga; Dr. Louis LeRoy, Nashville.
Texas—Dr. H. A. West, Galveston.
Washington—Dr. Park W. Willis, Seattle.
West Virginia—Dr. L. D. Wilson, Wheeling.
Wisconsin—Dr. W. T. Sarles, Sparta; Dr. Herman Reineking, Sheboygan.
Wyoming—Dr. E. E. Levers, Spring Valley.

Medical Organization.

A Plea for Uniformity.

The importance of practical uniformity in the essential features of organization in every state in the Union is so great, and has so constantly grown on all of those who have had opportunity for observing the work in the states which adopted plans of reorganization last, that an earnest plea is made to those who have the matter in charge in other states not to depart from the Association plan lightly or in the absence of the most obvious reasons for doing so. In fact, one of the prime objects of the movement from the outset was to get rid of the crazy-quilt system, or, rather, the lack of system, which stood in the pathway of every effort at legislative and other reforms in the past and secure such unity of both purpose and methods as would make the voice of the profession effective in securing every desirable advancement. The plan has now been so fairly and successfully tested, under such varied conditions and in widely separated states, as to demonstrate its adaptability to use in any state, and is no longer a matter of experiment.

The four essential features provided in the constitution and by-laws for state societies are so interdependent, so to speak, that no one of them can be cut out without irreparable injury and injustice to the plan as a whole for practical purposes. This is not a matter of experiment either, but the statement is based on the experience and actual results in those states which reorganized last year, but which left out one or more features, usually the House of Delegates, as compared with what has been accomplished in the same time and under very similar conditions in the still larger number of states which accepted it as a whole.

The four essential features of the Association plan, named in the order of their importance, are: 1. The county society as the unit of organization, and the foundation for everything above it. 2. The House of Delegates, composed of a specially selected and limited number of representatives from the county societies, to look after and foster the business, legislative and all material interests of the profession. 3. A Council, to be selected from the profession at large, each to cover a definite territory, and to represent every section of the state, to act for it under well-defined restrictions in the interval between meetings. 4. The General Meeting, composed of all the members of all the county societies who will attend, which can devote its entire time and attention to the reading and discussion of papers and other scientific work as well as social, it being relieved of the miscellaneous business duties which consumed so much time in the past with so little profit, and of the election of officers, which was another fruitful source of distraction and discontent.

If time and space permitted, these features might be profitably elaborated, but this is done so fully in the official constitution and by-laws as to make it less important. Others, again, might change the order in which these features or sections of the plan are stated, but when it is understood that the ultimate purpose is to make the county society not only a means of promoting good fellowship and of promoting the material interests of all under its jurisdiction, but of making it, if even in a humble way at first, a post-graduate school, which the General Meeting is in a broader sense for the fortunate ones who can attend it, brought at short intervals within the reach of all.

Now, it is true that much contained in the by-laws, where a wide departure is made from the brevity and compactness of expression observed in the constitution, is explanatory, suggestive and educational in character, and much is embraced which would not be necessary if such an organization as is contemplated was already in existence. In justification for this it is submitted that, under existing conditions, it is almost as important to furnish incentives to this work, to give practical and detailed information as to how it is to be done, and to put the reasons for all of it within easy reach of those who, as councilors and volunteers, will discuss the subject from one end of the country to the other, as to furnish the foundation and framework of the superstructure set forth in the constitution.

After the organization has been accomplished, which will require more time and self-sacrificing labor than is generally understood, anything found obsolete or impracticable can be easily eliminated or replaced by provisions better adapted to needs then existing.

Committees on organization yet to report, and members of state societies which have not reorganized, are urged to give this subject the grave consideration to which it is entitled, and especially are they urged not to change a plan designed and recommended by the American Medical Association for universal adoption, after much labor and expense, merely for the sake of change. Doubtless another committee might have devised something better, but, conceding this to be true, a departure from it now can not be otherwise than a step backward. If the profession of any state is not sufficiently advised or for any other reason is not ready to act favorably on the plan as a whole, it will be far better, in the light of the experience of those states which acted differently, to postpone action for another year. However well intended, any other course is unjust to and is likely to bring discredit on the entire plan of organization, and in the end will work an injustice on the profession of the state where it is done.

J. N. McCORMACK.

Iowa.

GRUNDY COUNTY.—The physicians of Grundy County met at Grundy Center, April 7, and organized a medical society, with Dr. Eugene A. Crouse, Grundy Center, president; Dr. William N. Moffett, Conrad, vice-president; Dr. E. H. Hoefer, Reinbeck, secretary, and Dr. M. H. Theilen, Grundy Center, treasurer.

Kentucky County Societies.

BOURBON COUNTY.—Dr. Louis Frank, Louisville, reports the organization of this society with Dr. Wilson G. Daily, Millersburg, president; Dr. Charles G Daugherty, Paris, secretary-treasurer, and Dr. Silas Evans, Paris, delegate.

HART COUNTY.—The physicians of Hart County met, April 15, and organized this society, with Dr. C. J. Walton, Munfordville, president; Dr. Thomas H. Garvin, Horse Cave, vice-president; Dr. Jesse J. Adams, Munfordville, secretary-treasurer; and Dr. B. L. Bruner, Hardyville, delegate.

CRITTENDEN COUNTY.—Dr. James H. Letcher, Henderson, reports the perfection of the organization of this society, with Dr. Isaac H. Clement, Tolu, president; Dr. J. William Trisler, Marion, vice-president; Dr. William T. Daughtrey, Marion, secretary, and Dr. J. O. Dixon, Marion, delegate.

GRANT COUNTY.—The physicians of Grant County met at Williamstown, April 13, and organized a county society, adopting the constitution and by-laws of the American Medical Association, after an address by Dr. Joseph E. Wells, councilor for the adjoining Ninth District. Dr. John M. Wilson, Williamstown, was elected president, and Dr. William Robinson, Corinth, secretary.

GRAVES COUNTY.—The physicians of Graves County met at Mayfield, April 14, and, after an address by the president of the state association, organized a county society, electing Dr. John L. Dismukes, Jr., Mayfield, president, and Dr. Milford W. Rozzell, Mayfield, secretary. The constitution and by-laws proposed by the American Medical Association were adopted without change.

FRANKLIN COUNTY.—The physicians of Franklin County met at Frankfort, April 15, and organized a county society, after a talk by Dr. Louis Frank, councilor of Louisville district. The constitution and by-laws of the Association were adopted. A list of the officers has not been received.

LIVINGSTON COUNTY.—The physicians of Livingston County met at Smithland, April 13, and organized a county society, after an address by Dr. James T. Reddick, Paducah. The constitution and by-laws suggested by the American Medical Association were adopted without change. The following officers were elected: President, Dr. Frederick G. LaRue, Smithland; vice-president, Dr. Oliver R. Kidd, Carrsville; secretary,

Dr. Edward Davenport, Hampton; treasurer, J. E. Chipps, Birdsville; and delegate to the state association, Dr. John V. Hayden, Salem.

Mississippi.

At its annual meeting held at Vicksburg, April 15-17, the Mississippi State Medical Society adopted the Association plan of organization without a single change. The constitution and by-laws were reported favorably by the committee on organization in 1902, and had lain on the table for a year. It was taken up at the opening of the meeting this year and referred to a large committee, representing every section of the state, which went over the whole matter thoroughly and again made a favorable report. As some of the members did not understand all that proposed, it was read section by section in the society, and then adopted without a dissenting vote.

The state was divided into ten councilor districts, with special reference to lines and convenience to travel for the councilor in each, and the following were appointed as members of the council: E. H. Martin, Clarksdale; K. P. Perkins, Batesville; C. D. Mitchell, Pontotoc; W. M. Paine, Aberdeen; J. A. Crisler, Yazoo City; W. D. Kiger, Brunswick; O. B. Quin, McComb City; J. R. Packett, Meridian; D. J. Williams, Ellisville and H. M. Folkes, Biloxi.

A resolution was adopted, authorizing the secretary, on recommendation of the councilors, to recognize and issue charters to county societies. He was also instructed to procure and distribute to the profession of Mississippi 3,000 copies of the new constitution and by-laws, sending with each of these a copy of the constitution and by-laws for county societies An appeal was made to every reputable physician in the state to join his county society, and through it his state association.

The following officers were elected: President, Dr. Chas. D. Mitchell, Pontotoc; vice-presidents, Drs. Joseph Waldauer, Vicksburg; May F. Jones, Columbus, and C. L. Culley, Jackson; secretary, Dr. J. J. Haralson, Forest; treasurer, Dr. J. F. Hunter, Jackson.

The officers and council were carefully selected with reference to the large amount of work to be done during the next year, and the promise is for excellent results. The medical and health laws of Mississippi are nearly all that can be desired, but their enforcement has been crippled in the past by a lack of unity in the profession. With a good organization almost anything desirable is within its reach J. N. McCORMACK.

Missouri.

As we go to press information comes that the Missouri State Medical Association, which has been in session this week, has adopted the constitution and by-laws for state societies endorsed by the American Medical Association, with practically no modifications. Thirty-six component societies, with a membership of 1,088, were reported.

Nebraska County Societies.

BROWN COUNTY.—On April 8 physicians of Brown County met at Long Pine and organized a county medical society, with Dr Harmon P. McKnight, Long Pine, president; Dr. H. A. Brown, vice-president, and Dr. G. O. Remy, Ainsworth, secretary-treasurer.

NANCE COUNTY.—The physicians of Nance County met at Fullerton, April 8, and organized a medical society to be affiliated with the state and national associations. Dr. Edward Johnson, Fullerton, was elected president; Dr. Charles W. Ford, Belgrade, vice-president, and Dr. Dora M. Judkins, Fullerton, secretary-treasurer.

Tennessee County Societies.

WILSON COUNTY.—Wilson County physicians met recently at Lebanon and organized a county society, with Dr. John W. McFarland, Lebanon, president.

CARTER COUNTY.—The medical profession of Carter County met at Elizabethton, and organized a county society with Dr. J. H. Alexander, Elizabethton, president

HOUSTON COUNTY.—This society was organized at Erin, April 6, with Dr. Alfred H. Abernathy, Erin, president; Dr. G. D. Boone, Erin, vice-president; Dr. W. H. McMillan, secretary, and Dr. R. H. Baylor, Erin, treasurer.

Societies.

COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, FIFTY-FOURTH ANNUAL SESSION, NEW ORLEANS, MAY 5-8.

Texas State Medical Association, San Antonio, April 28.
Louisiana State Medical Society, New Orleans, April 28-30.
Medical and Chirurgical Faculty of Maryland, Baltimore, April 28-30.
Nebraska State Medical Society, Lincoln, April 28-30.
Illinois State Medical Society, Chicago, April 29-May 2.
Arkansas Medical Society, Jonesboro, April 30-May 2.
Association of American Medical Colleges, New Orleans, May 4.
American Proctologic Society, New Orleans, May 5.
Kansas Medical Society, Concordia, May 6-9.
American Urological Association, New Orleans, La., May 8-9.
American Academy of Medicine, Washington, D. C., May 11-12.
American Therapeutic Society, Washington, D. C., May 11-13.
Oklahoma Territorial Medical Association, Guthrie, May 12.
American Association of Genito-Urinary Surgeons, Washington, D. C., May 12-14.
American Surgical Association, Washington, D. C., May 12-14.
American Orthopedic Association, Washington, D. C., May 12-14.
American Pediatric Society, Washington, D. C., May 12-14.
Association of American Physicians, Washington, D. C., May 12-14.
American Medico-Psychological Association, Washington, D. C., May 12-15.
American Ophthalmological Association, Washington, D. C., May 13-14.
Association of Military Surgeons of the United States, Boston, May 19-21.
New Hampshire Medical Society, Concord, May 21-22.
North Dakota State Medical Society, Bismarck, May 21-22.
South Dakota State Medical Society, Mitchell, May 27-28.
Connecticut Medical Society, Hartford, May 27-28.

Congress of American Physicians and Surgeons.—The sixth triennial session will be held in Washington, D. C., May 12, 13 and 14.

Knox County (Tenn.) Medical Society.—At the annual meeting, at Knoxville, April 2, Dr. Ernest R. Zemp, Knoxville, was elected president.

Cass County (N. D.) Medical Society.—At the annual meeting, held in Fargo, March 30, Dr. Hezekiah J. Rowe, Casselton, was elected president

National Association of United States Pension Examining Surgeons.—The second annual meeting will be held in Washington, D. C., May 13 and 14.

Washington County (Iowa) Medical Society.—At the annual meeting, held in Washington, April 8, Dr. George W. Hay was re-elected president and Dr. Cloyd A. Boice secretary, both of Washington.

Marshall County (Ind.) Medical Society.—At the meeting, held in Plymouth, April 9, Dr. R. Clarence Stephens was elected president; Dr. Adolphus C. Holtzendorff, vice-president, and Dr. Novitas B. Aspinall, secretary, all of Plymouth.

Baltimore Pediatric Society.—A society was organized last week for the promotion of the department of pediatrics. Dr. Charles W. Mitchell was elected president, and Dr. Henry M. Fitzhugh secretary. Meetings will be held monthly.

Pulaski County (Ill.) Medical Society.—At the annual meeting Dr. John F. Hargan, Mound City, was elected president; Dr. William C. Rife, Villa Ridge, vice-president, and Dr. A. Willard Tarr, New Grand Chain, secretary and treasurer.

Lyon County (Kan.) Medical Society.—The twentieth annual meeting was held in Emporia, April 7, at which Dr. John M. Parrington was elected president; Dr. Frank Eckdall, vice-president, and Dr. John M. Poindexter, secretary and treasurer, all of Emporia.

Howard County (Md.) Medical Society.—At the annual meeting of this body, at Ellicott City, April 7, Dr. John W. Lacy, Lisbon, was elected president; Dr. Bernard J. Byrne, Ellicott City, vice-president, and Dr. William B. Gambrill, Alberton, secretary and treasurer.

Lauderdale County (Tenn.) Medical Society.—At the annual meeting, held in Ripley, Dr. Alexander H. Young, Ripley, was elected president; Dr. William H. Tucker, Double Bridges, vice-president; Dr. Gustavus A. Lusk, Ripley, secretary, and Dr. W. D. Miller, treasurer.

Jefferson County (Ark.) Medical Society.—This society, at its annual meeting at Pine Bluff, April 8, elected Dr. William H. Blankenship, Altheemer, president; Dr. J. William Scales, Pine Bluff, vice-president, and Dr. William Crutcher, Pine Bluff, secretary and treasurer.

Cass County (Ill.) Medical Society.—The annual meeting was held at Virginia, April 8, Dr. George Bley, Beardstown, was elected president; Dr. Daniel Lyons, Ashland, vice-president; Dr. John A. McGee, Virginia, secretary, and Dr. John G. Franken, Chandlerville, treasurer.

Richland County (Ohio) Medical Society.—The annual meeting was held at Mansfield, April 4. Dr. M. T. Love, Shelby, was elected president; Dr S. Edwin Findley, Mansfield, vice-president; Dr. J. Lillian McBride, Mansfield, secretary, and Dr. Emma Millikin, Ontario, treasurer.

Orange County (Cal.) Medical Society.—At the meeting, held in Fullerton, April 7, Dr. William Freeman, Fullerton, was elected president; Dr. Foster E. Wilson, Westminster, vice-president; Dr. Howard S. Gordon, Westminster, secretary, and Dr. James R. Medlock, Santa Ana, treasurer.

Western Alumni Association of the University and Bellevue Hospital Medical College.—The third annual banquet will be held at the Sherman House, Chicago, April 30, at 6:30 p. m. Dr. George N. Kreider, Springfield, is president of the association, and Dr. Willis O. Nance, Chicago, secretary.

Golden Belt Medical Society.—At the annual meeting, in Abilene, Kan., Dr. John D. Riddell, Enterprise, was elected president; Dr. Edward W. Hawthorne, Gypsum, vice-president; Dr. Albert A. Shelley, Abilene, secretary, and Dr. Lamorte R. King, Junction City, treasurer. The next meeting will be held at Salina in July.

Jersey County (Ill.) Medical Society.—The forty-seventh annual meeting was held in Jerseyville, April 8, Dr. Augustus K. Van Horne, Jerseyville, retiring president, was the only survivor of the founders of the society. Dr Allen A. Barnett was elected president; Dr. John S. Williams, vice-president, and Dr. Henry R. Gledhill, secretary and treasurer, all of Jerseyville.

San Diego County (Cal.) Medical Society.—At the annual meeting, held in San Diego, April 3, the following officers were elected: President, Dr. Fred Baker, San Diego; vice-president, Dr. William V. Nichols, Oceanside; secretary and treasurer, Dr. Thomas L. Magee, San Diego, and delegate to the Medical Society of the State of California, Dr. Fred R. Burnham, San Diego.

Marion County (Ohio) Medical Society.—The first meeting of the merged Marion County Medical Society and Marion Academy of Medicine was held at Marion, April 7. Dr. Robert Ramroth was re-elected president; Dr. Charles E. Sawyer, elected vice-president, and Drs. Herman S. Rhu and Francis B. Sawyer were re-elected secretary and treasurer respectively, all of Marion.

Dubuque (Iowa) Medical Society.—The fifteenth anniversary of this society will be celebrated by a special meeting, June 18, at which papers are to be read by Drs. C. H. Mayo, Rochester, Minn., and G. F. Lydston, Chicago. In the afternoon a symposium on headache will be participated in by Drs. Hugh T. Patrick, Alfred C. Crofton, Casey A. Wood and Norval H. Pierce of Chicago, and Dr. John S. Lewis, Dubuque.

McLean County (Ill.) Medical Society.—At the annual meeting, held in Bloomington, April 2, and reported in THE JOURNAL of April 18, the plan of affiliating the society with the Illinois State Medical Society and the American Medical Association was adopted by a large majority. Drs. Charles M. Noble, Charles E. Chapin and John H. Fenelon, all of Bloomington, were elected censors, and Drs. William R. Shinn, Chenoa, and J. Whitefield Smith, Bloomington, delegates to the state society.

Pennsylvania Society for the Prevention of Tuberculosis.—At the annual meeting, held in Philadelphia, April 8, Dr. Howard S. Anders made an address, urging the necessity for a popular educational movement for the spread of practical knowledge on the subject. Dr. S. A. Knopf, New York, also addressed the society. One plan suggested, a committee being appointed to consider the matter, was that of public lectures. A committee was appointed to assist in the enforcement of the anti-spitting ordinance recently passed by councils. Dr. Howard S. Anders was re-elected president.

Academy of Ophthalmology and Oto-Laryngology.—The Western Ophthalmologic and Oto-Laryngologic Association held its annual meeting in Indianapolis, April 9, 10 and 11. It was decided to change the name of the organization to the Academy of Ophthalmology and Oto-Laryngology. The following officers were elected: Dr. Edward Jackson, Denver, president; Drs. Dudley S. Reynolds, Louisville, John J. Kyle, Indianapolis, and John W. Murphy, Cincinnati, vice-presidents; Dr. Derrick T. Vail, Cincinnati, secretary, and Dr. Otto J. Stein, Chicago, treasurer. A resolution was adopted urging the state boards of health throughout the United States to secure the attention of street car and steam railway companies for an early consideration of the sanitary and therapeutic value of noiseless car wheels.

Iowa State Medical Society.—The fifty-second annual meeting was held at Sioux City, April 15 to 17. The new constitution and by-laws in conformity with the plan of reorganization were read by Dr. Van Buren Knott, Sioux City, in the absence of Dr. David S. Fairchild, Clinton, and after a little discussion, were adopted unanimously. The following officers were elected: President, Dr. Joseph A. Scroggs, Keokuk; vice-presidents, Drs. Donald Macrae, Jr., Council Bluffs, and Dallis M. Wicks, Cedar Falls; secretary, Dr. Vernon L. Treynor, Council Bluffs; assistant secretary, Dr. Francis A. Ely, Des Moines; treasurer, Dr William B. Small, Waterloo; trustees, Drs. Gilbert G. Cottam, Rock Rapids, and Daniel W. Finlayson, Des Moines; and member of the House of Delegates of the American Medical Association, Dr. Samuel Bailey, Mount Ayr, for two years. Des Moines was selected as the next place of meeting.

International Housing Congress.—This congress, which is to be held from July to November at the Grand Palace, in the Champs Elysees, is to have an American committee, of which Richard Watson Gilder of New York has just been made chairman. The other members of the committee are: M. E. Ingalls, Cincinnati; William B. Howland, Dr. E. R. L. Gould and James H. Hyde of New York; Carroll D. Wright of Washington; Albert Shaw of New York; Robert Garrett of Philadelphia. The object of the congress is to show the world the great need for improvement in both rural and city homes for workmen and clerks, and to this end there will be a collection from many countries of models of improved houses, of materials and methods of construction, and of furniture and decorations. There will also be models to show the sanitary, or, rather, unsanitary conditions in factories and many other places in which men work. It is expected that the work of the congress will exert a potent influence in the control of consumption and alcoholism.

Tennessee State Medical Association.—The seventieth annual meeting, held in Nashville, April 14, 15 and 16, was the first meeting since the new constitution and by-laws came in force. The attendance was double that at any previous meeting. The prize for the best essay was awarded to Dr. Edward C. Ellett, Memphis. The following officers were elected: President, Dr. Isaac A. McSwain, Paris; vice-presidents, Drs. William H. Sale, Covington, Louis Leroy, Nashville, and Claude P. Fox, Greeneville; secretary, Dr. Deering J Roberts, Nashville (re-elected), and treasurer, Dr. William C. Bilbro, Murfreesboro. As the society at this meeting passed the thousand mark on its membership roll, it was entitled to three members of the House of Delegates of the American Medical Association. The following were elected: Dr. Louis Leroy, Nashville, to succeed Dr. W. Frank Glenn, resigned; Dr. James B. Murfree, Murfreesboro, to succeed Dr. George C. Savage, Nashville, resigned on account of ill-health; Dr. Daniel E. Nelson, Chattanooga, delegate for two years, and Dr. William B. Sanford, Memphis, alternate; Dr. Jeremiah L Crook, Jackson, delegate, with Dr. W. J. Miller, Johnson City, alternate. The next meeting will be held in Chattanooga.

AMERICAN MEDICAL ASSOCIATION.

Meeting of the Section on Hygiene and Sanitary Science, Saratoga Springs, N. Y., June 10, 1902.

The Chairman of the Section, Dr. Arthur R. Reynolds, Chicago, in the chair.

Symposium on Boards of Health and the Manufacture of Vaccine Lymph and Antitoxin.

THE CHAIRMAN—Dr. Marcy suggests that we consider the manufacture of vaccine and antitoxin.

DR. H. O. MARCY, Boston—The question is one which is exciting a great deal of attention in Massachusetts at present. The State Board of Health has for some time been making its own antitoxin, and now it is proposed to give it power to make vaccine lymph as well. The issue is: Shall we rely on large and reputable firms, like Parke, Davis & Co. and the New England Vaccine Company, as we have been doing hitherto, or will it be better to let the board of health organize another department and manufacture its own? Is it wise, in

other words, to further extend the paternal influence of the state, or should we continue to rely on private manufacturers?

DR. S. A. KNOPF, New York City—I am not a health officer, but I have been present at meetings in New York where this subject has been discussed. I recall particularly a meeting under the auspices of the Society of Medical Jurisprudence, at which there were present representatives of the health departments of the city and state, and also representatives of commercial houses manufacturing vaccines. The discussion was very heated. Of course, the representatives of the manufacturers claimed that in a free country they had a right to manufacture vaccine lymph and antitoxin, and the health department of the city maintained that it had a right to do the same. During the discussion it was stated that some inferior antitoxin had been sold by the health department of New York City to the health department of Chicago. Possibly the chairman will be able to tell us something about that. I took part in the discussion at the close, and I may be allowed to repeat here the substance of what I said then. I took the position that we had no right to prevent the private manufacturers from continuing to make these preparations, but that, on the other hand, boards of health had also a right to make them. What, however, I considered of most importance was that every state should have a control laboratory, and that no vaccine or antitoxin should be allowed to be put on the market until it had been tested and passed by that institution. Only in this way, I believe, can we rely on getting the best possible products for our patients.

DR. BENJAMIN LEE, Philadelphia—This is a question that has been forced on the attention of all of us in a very pointed manner during the last two or three years. The position which I have been inclined to take is, that the necessity the mercantile producer is under of keeping up his product to a proper standard if he wishes to sell it probably affords a greater safeguard than would be assured by placing the matter in the hands of men appointed by state governments, who, unfortunately, are too often appointed simply for political reasons. At the same time, we can not shut our eyes to the fact that there have been occurrences in this country during the past two years which go to show that some of the commercial virus has been absolutely inert, and some of it, on the other hand to a greater or less extent, dangerous. I believe the solution of the problem is to be found very much on the lines suggested by Dr. Knopf—that we should not prevent the production of commercial vaccine, but that each board of health should exercise a power of supervision and should see that no virus is foisted on the public which is either ineffective or likely to be dangerous. I was talking yesterday to a former member of the Pennsylvania Board of Health, who for nearly two years supervised the sanitary work in Porto Rico when the island was in charge of the United States Army, and he informed me that all the virus imported from this country—whether obtained from the New York Board of Health or from private manufacturers—was absolutely inert except in the case of one manufacturer, who produced what he called a triple-charged point. That was successful in some instances, but all the others were inert, and the way they met the problem was this: With some of this triple-charged virus they inoculated a number of calves, and driving these calves from town to town vaccinated the people direct from the animal. The result was that very soon and for some time thereafter there was not a case of smallpox to be found on the island, whereas when the army first went there the disease was rife. He tells me, however, that smallpox is now beginning to make its reappearance, and that it will be necessary to investigate the matter with the view of discovering the causes.

DR. C. B. JOHNSON, Champaign, Ill.—Several years ago, in response to the solicitations of the Illinois State Medical Society, the University of Illinois established a vaccine laboratory on its grounds at Champaign. This has since been in operation and is under the care of able men, professors in the university. They make good, reliable vaccine, but other manufacturers come in the town and sell their products, and in other parts of the state the University of Illinois vaccine has by no means had the patronage it deserves. Just why this is true I am unable to say, unless it be that the commercial motive is necessarily lacking to properly place the Illinois product on the market.

DR. MARCY—Do they sell it?

DR. JOHNSON—At first they did not, but conceiving this to be unfair to other manufacturers the University of Illinois vaccine is now sold at the usual prices.

DR. H. D HOLTON, Brattleboro, Vt.—Do they make points?

DR. JOHNSON—Yes, they make points, and recently tubes also.

DR. SENECA EGBERT, Philadelphia—My views are very much the same as have been expressed by Dr. Lee. I feel that, as a rule, we are safer to trust to large firms, whose regular business it is to make these products, and whose interest it is to maintain the quality of their goods. At the same time, there is this to be taken into account. About six months ago the demand for vaccine lymph became so great that there was ground for believing certain firms shaved things a little and ran risks. One day I heard over the luncheon table of a certain firm having run out of vaccine lymph, and buying another firm's product, on which they put their own label. It may have been only gossip, but if true this clearly was not right. Even if one firm's was as good as another, it was a wrong thing to do, for the firm which bought the lymph knew nothing of their own knowledge as to its quality. While no one may be able to put his finger on the cause of tetanus following vaccination, it is at least possible that some firm was induced by the pressure of business to become careless. Such a thing might not occur again for a hundred years, but, as I have said, it is one of the things that have to be taken into account in considering this matter. A good, thorough examination of all these preparations would be an additional precaution against the possibility of such a thing, and, what is more, it would give the public a feeling of confidence that they do not have now. It is going to be hard in the near future to vaccinate the people in Philadelphia, even if we use all our powers of persuasion and do what we can to show them the advantages of it, for many have at present the fear of the graver danger of tetanus.

DR. H. M. BRACKEN, Minneapolis—The question of control laboratories is an interesting one. The legislative committee discussed it at its February meeting in Washington, and the general opinion was in favor of central inspection. It was very much doubted if any system by which the work should be carried on by individual states would be satisfactory. It might be all right in some states, but not in others, and it is obvious that any such system of inspection should be uniform. For that reason it was agreed that it should be federal inspection if possible. I believe that as a rule the interest of the manufacturer in keeping up the quality of his goods will secure for us as good qualities of vaccine virus and antitoxin as we can get through the state laboratories. Their interests are involved to such an extent that they can not afford to run any risks, and they would probably be even more careful than the state laboratories. If all the states had Theobold Smiths at the head of their laboratories it might be perfectly safe to trust to them; but it is well known that not all have men of his standing, and that they can not get them. In fact, in some places it is hardly possible to get good men to take up this kind of work.

Sometimes the state may advantageously produce certain of these products, but I do not think they should ever do so with a view to commercial gain. State products should always be for free distribution. There is no reason whatever for any of our state boards of health to go into commercial enterprises.

Dr. Lee has referred to the fact that vaccine virus imported into Porto Rico from the United States was found to be inert. That, I would like to point out, may have been due to climatic influences. It is well known that vaccine virus loses its efficacy when exposed to a high temperature, and that glycerinated vaccine is easily rendered inert in this way. It is natural that they should get better results in Porto Rico when they inoculated direct from the calf. I hope

the time will come when there will be inspection of all these animal products, but I repeat, this should be under the direction of the federal and not of the state governments. As regards antitoxin generally, I do not think the states are in a position to take up their production yet. It is better to trust to the manufacturers.

DR. HENRY MITCHELL, Asbury Park, N. J.—I thoroughly agree with the general proposition that control should be exercised over these products and that at the same time the right to manufacture them should be free; but the question of what shall this control consist, has not yet been settled. The suggestion of the last speaker that it should be exercised by some central authority seems to be beyond our reasonable expectations. There are too many difficulties in the way. In the first place, the inspection must not be limited to one specimen of certain products, because the very next package may be inert or contain hairs and pus. A microscopic examination of the lymph would certainly not be enough, but it would also be necessary to provide a test for the efficiency of the lymph, and such a test could be provided only by means of a biologic examination. Such an examination by municipal authorities would be of very doubtful value, and I question whether state control would be sufficient. In New Jersey we have a new law providing that the state laboratory of hygiene may make examinations of vaccine lymph and other animal products issued for remedial purposes, and examinations have been made, but we find it very undesirable to announce the results, because manufacturers are naturally desirous of being complimented or seek to obtain certificates that will be useful to them in their business, and the examination of one lot of goods, as I have said, does not warrant us in making any general statement.

DR. J. EDWARD STUBBERT, New York—I am very much interested in this question because of a little practical experience I have had as to the comparative results obtained from the use of government antitoxin and that made by private manufacturers. I have used for a number of years the antitubercle serum prepared by the Department of Agriculture at Washington, and I find that I can always depend on it; whereas, when I used the products of private firms I could never depend either on the strength of the dose or the results that were likely to follow. When I use the government serum I know exactly how many minims will produce certain effects. I do not know anything about the results if I use the antitoxins of private firms. For my part, I should like to see the manufacture of every article like antitoxin and vaccine virus put in charge of a central national authority. While we know that it is true that in certain cities politics exercises a bad influence, we also know that in Washington they have been successful in eliminating politics from their scientific work. I would not have the same confidence in the products of city boards of health as I have in those of the Department of Agriculture at Washington. Therefore, I say, that what we should do is to work for the centralization of this work, and keep it out of politics.

THE CHAIRMAN—Would you have the government furnish these products free of cost?

DR. STUBBERT—I never have charged my patients for any antituberculin I have obtained from the Department of Agriculture, but I think they ought to pay for it, and that we ought to pay the government.

THE CHAIRMAN—Would you have it sold at cost of production?

DR. STUBBERT—Yes.

DR. SENECA EGBERT, Philadelphia—This brings the question very close to that discussed by Surgeon-General Wyman in his paper[1] on "Sanitation and Politics," and also the matter of the establishment of a department of health. I am willing to qualify some of the remarks I made earlier in the discussion. After what I have heard I think a system might be devised under which we could have competent and satisfactory inspection by a central authority. This body could have a representative at each manufactory to supervise and inspect the work, and, to prevent collusion and fraud, the men could be changed about from time to time.

1. THE JOURNAL A. M. A., Feb. 14, 1903.

DR. STEPHEN SMITH, New York—I do not know whether any one is here to speak for New York. When I was connected with the board of health of that city, many years ago, the subject of smallpox became of interest because of a widespread epidemic. It appeared that for the last fifty years we had been having an epidemic every five years. The explanation was that every one was vaccinated during the prevalence of smallpox, but in the following four years vaccination would be neglected. At the end of five years there would be a large accumulation of unvaccinated cases. It was determined to establish a vaccine department in the then Metropolitan Board of Health, and appoint a corps of vaccinators who should constantly vaccinate the children in the tenement houses. It was soon found that such lymph as was then available was not very satisfactory, and to secure pure matter we established a vaccine farm in New Jersey. From that time to this the vaccine obtained from the farm referred to has been uniformly successful. The popular feeling in New York is in favor of the vaccine from that farm. A question frequently put to physicians is: Where did you get the vaccine matter? Unless it proves to be obtained from the board of health it is apt to be rejected. I ought to add that the result of the establishment of the vaccine bureau has been that no epidemic of smallpox has occurred in New York City for thirty years. There have been occasional outbreaks of the disease, but it has never succeeded in spreading beyond the localities where it appeared. Commercial virus is at a discount in New York, both with the public and the profession. I am decidedly in favor of governmental control of the manufacture and sale of these products, but I am not clear as to how it is to be done.

THE CHAIRMAN (After calling Dr. Marcy to the Chair)—I have no sympathy with the sentiment that is so careful of trade and commercial interests in connection with the production and sale of vaccine and antitoxin. The question of vaccination and the saving of life threatened by diphtheria is too sacred to be left to the caprices and hazards of commerce.

I believe that all animal products used in the treatment of disease should be furnished by the state; and by the state, I mean either federal, state or local authority. Until the state will furnish these products I believe it to be the duty of health officers carefully to inspect them as to their purity and their potency. We act on that principle in Chicago.

We receive our vaccine in lots of from five to ten thousand tubes, and at present we are buying it from a Milwaukee concern. From each lot a number of tubes are taken and subjected to bacteriologic inspection to determine the presence or absence of pathogenic bacteria. If it be found safe by this test it is tried on children who have not been previously vaccinated. If it comes up to our standard of potency it is then accepted. If bacteria are found, we keep it and test it at a later time, when the glycerin has had an opportunity to destroy the bacteria. But if it be inert, we destroy it to prevent it being sold to others. We insist that all vaccine be sixty days old before it is used, because our experience has taught us that at least sixty days in glycerin is necessary to free it from pathogenic bacteria. We have learned further that if it be kept in a cool place it will retain its potency for from forty to sixty days longer.

Dr. Knopf has referred to an unfortunate statement of some members of the New York Health Department, made at Albany when an inquiry was in progress on an issue raised by drug houses over the right of the New York Health Department to make and sell antitoxin. The statement was, in effect, that an inferior grade of antitoxin was made and sold to Chicago. The statement was immediately challenged by the Department of Health of Chicago through the Associated Press and by letter to Dr. Biggs, and the answer came from the New York department that they made but one kind of antitoxin and what had been sold to Chicago was the same as that used in New York. The truth of this was demonstrated in our own laboratory tests of the antitoxin as received, as well as by the results from the treatment of diphtheria by this antitoxin, which for nearly seven years have given a more brilliant proof of the life-saving power of the product of the New York Department of Health than any other published up to the present time.

I have never been able to understand to what the mental lapse was due that made the witnesses testify as they did at Albany. But I presume they were endeavoring to show that they were not interferring with trade, and that they intended to say that they only sold to Chicago the surplus they did not need for themselves. No one for a moment believes that Dr. Biggs would lend himself to the preparation of an inferior kind of antitoxin or that he would do anything that was not absolutely right. We are still buying our antitoxin of the New York Department of Health, and have never yet been obliged to return any part of it because it did not come up to our requirements. This is more than can be said of some of the products of other manufacturers submitted to the same tests in our laboratory.

If the state should manufacture these products it could have no interest in putting an inferior article on the market and could afford to destroy an entire lot if there were anything wrong with it, and no temptation would influence it to do otherwise. We all know that the demand in the past year or more for vaccine lymph has been very great and has taxed the capacity of all producers to meet it. Under such circumstances the temptation to sell inert or "unripe" vaccine that has not been tested is very great. We know in the west that large quantities of inert vaccine have been used, and we know also that large quantities have been used that produced spurious sores. If the state were the producer and distributer that would never occur. The results from the large sale of spurious vaccine have made the work of health officials very much greater than it would otherwise be, in making persons believe they were vaccinated when they were not. Such vaccine is largely responsible for the delay and difficulty in suppressing the present smallpox epidemic.

I am glad to learn from Dr. Johnson that the University of Illinois is producing vaccine lymph. I shall certainly avail myself of the information and procure supplies from that institution when I get home.

The question who should manufacture animal products to be used as remedies and preventives of disease should not be a subject of discussion at all. Commerce has no right to traffic in remedies where human health and life are at stake. These agents and their uses are high above any possible demands that the rights of commerce can make.

The Department of Health of New York has conferred a boon on humanity by producing an antitoxin that has set the mark for all other producers.

Politics in some parts of the country may play a part in securing the proper operation of sanitary laws and the tenure of office of those who enforce them, but I think the evils of politics are rather overdrawn. The change of politics has never interferred with Dr. Biggs of New York nor Dr. Johnson of Illinois, and all the politics in the country could not make either of these men do anything that was wrong. There is politics everywhere, and in Chicago we have a large independent vote that is cast for the man who is considered the best man in local affairs, and political parties can not reckon without this independent vote.

I am in thorough accord with the recent measure for increasing the power of the Marine-Hospital Service, and I only hope that the movement will grow until that bureau eventually attains the dignity of a department of the government instead of a bureau.

The first public question and the highest public question is that of public health, and this idea is fast taking root in the public mind. The forces are moving with those who are engaged in life-saving work, and the need for continuing competent medical officers in medical offices is rapidly gaining ground.

The influence that goes out from this Section's meeting, though we are small in numbers, is far-reaching and powerful in its results, and I have entire confidence in the future, both of my profession and my country.

We are honored by the presence of Dr. Stephen Smith of New York and others who were pioneers in sanitary work more than a generation ago and who have devoted their lives to its up-building, and I sincerely trust that they will live to see the full fruition of their hopes and their labors.

DR. H. O. MARCY—I raised this question for the sake of instruction, and I am well pleased with the discussion which has taken place. I have been interested in this question for a very considerable time and given it a good deal of study. My attention was first directed to it in connection with the work of the late H. A. Martin—a name ever to be revered—who, next to Jenner, has probably done the most valuable service in the control of smallpox. He introduced bovine vaccination into America. I am sure I can emphasize all your chairman has said as to the importance of this question; but sometimes questions even of this character have different sides to them. In Massachusetts we have just been going through a unique experience with compulsory vaccination. In some quarters of the community there was a perfect revolt against vaccination, and we had at the state house troops of men and women fighting for the sacred abstract principle of not being vaccinated against their will. Still, vaccination is going on, and we are discussing what dangers may arise from it and how these can best be avoided. No more important subject could be discussed, and when the report of these proceedings is published I am sure it will make instructive reading. People in different parts of the country want just such information as has been given us to-day, and I would like to suggest that the discussion after being revised by those who have taken part in it should be printed in separate form and extensively distributed.

DR. S. A. KNOPF—I should like to thank the chairman in the name of New York for clearing it of the imputation that it sold inferior antitoxin to Chicago. As we all know, our esteemed friend, Dr. H. M. Biggs, who was at the head of the bacteriologic department at the time, is beyond reproach, and we are all glad he has been reappointed.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Burns.

In the treatment of burns Bjorkman, in "Merck's Archives," recommends, in burns of the first degree, disinfection locally, and perhaps the ice bag to relieve pain. Lead carbonate ointment or diachylon salve are of benefit applied locally.

In burns of the second degree the pain must be relieved, hot drinks administered and hot water bottles applied around the patient, and, if necessary, hypodermic injections of ether or camphor to prevent shock. The site of the lesion should be thoroughly cleansed with a 3 per cent. carbolic acid solution or a 1/1,000 corrosive sublimate solution. Blebs should be opened, allowing the epidermis to remain. The part should be dressed and elevated to permit the retrograde flow of venous and lymph currents. In burns of third degree, morphin will have to be resorted to in order to relieve the patient's suffering; ammonium carbonate, strychnin, caffein and other stimulants administered to prevent shock and artificial heat applied. The limb must be elevated, proper antiseptic dressings applied, and as soon as the first signs of granulation appear, gentle passive movements and light massage should be resorted to if ankylosis is feared. In the local treatment, to alleviate pain, the author recommends cold applications locally, elevation of the limb and morphin hypodermically. As a local anodyne he recommends Stahl's liniment, which is composed of the following:

℞.	Thymol	gr. viii	50
	Sodii bicarb.	ʒii	60
	Olei lini		
	Aq. calcis, āā	ʒiv	120

M. Ft. linimentum. Sig.: Apply the liniment to the injured member and cover with borated gauze.

This dressing should be renewed when the pains begin. He mentions aristol as a good local analgesic or cocain on small surfaces.

Picric acid is an old-time remedy which is said to serve as an analgesic, an antiseptic, and has keratogenetic powers. It may be combined as follows:

℞. Acidi picrici ..... ℥ss 2
Spts. vini ..... ℥x 40
Aq. destil q. s. ad ..... ℥xiv 420
M Sig.: Apply locally.

The lesion should be thoroughly cleansed with this solution, used on absorbent cotton. The blebs should then be opened, allowing the skin to remain. Strips of gauze soaked in the solution should be applied and allowed to remain for four or five days, when a new dressing should be applied.

In burns of the second and third degree more satisfactory results, according to the author, are obtained by dry dressings with antiseptic powders such as airol, xeroform, and nosophen, as these preparations are harmless and are to be applied in full strength. Salves may be substituted, made up as follows:

℞. Airol ..... ℥i 4
Lanolini anhyd.
Liq petrolati, āā ..... ℥iv 15
M. Ft. unguentum. Sig.: Apply locally and cover with gauze and absorbent cotton, and allow the dressing to remain intact for several days; or:

℞ Ichthyol ..... gr. xlv 3
Olei olivæ (sterile) ..... ℥iiss 10
Lanolini
Liq. petrolati, āā ..... ℥x 40
M. Ft. unguentum. Sig.: Apply locally; or:

℞. Sol. plumbi subacet. ..... ℥iss 6
Olei lini (sterilized) ..... ℥iiss 10
Xeroformi q. s. ad ..... ℥i 30
M. Ft. unguentum. Sig.: Apply freely on gauze.

Rachitis.

Comby, in "Med. Press," states that he has obtained the best results from the following in the treatment of rickets:

℞. Olei morrhuæ ..... ℥iv 120
Sol. calcii lacto-phos. (50 per cent.) .... ℥i 30
Syr. lacto-phos. ..... ℥iii 90
Tinct. cinnamomi ..... m. lxxv 5
M. Sig.: Two to five teaspoonfuls daily; or:

℞. Essentiæ limonis ..... gtt. ii 12
Phosphori ..... gr. 1/6 01
Sacchari ..... ℥i 30
Olei amygd. dulcis ..... ℥iiss 75
M. Sig.: One teaspoonful daily.

Treatment of Wounds.

Sleich, according to the "N. Y. Med. Jour.," recommends the following topical applications that are nutrient to the tissues and non-irritating:

PEPTONIZED PASTE.

℞. Peptone (dry)
Amyli
Pulv. zinci oxidi, āā ..... ℥ss 15
Pulv. acaciæ ..... ℥i 30
Lysol ..... gtt. v 30
Aq. destil. q. s.
M. Ft unguentum. Sig.: Apply locally.

SERUM PASTE.

℞. Seri bovis ..... ℥ii 60
Zinci oxidi ..... ℥i 30
M. et fiat pulvis.

After the foregoing is dried and reduced to a powder the following mixture is then prepared:

℞. Pulv. seri et zinci oxidi ..... ℥i 30
Aquæ ..... ℥ss 15
Peptonic paste ..... ℥ii 8
M. Sig.: Apply locally.

The author especially recommends the foregoing as an application to varicose ulcers.

In the treatment of syphilis the following is recommended by the author as a local application:

℞. Ung hydrarg. ..... ℥i 30
Peptonic paste ..... ℥ii 60
Olei theobrom. ..... ℥iii 12
Aq. destil. ..... ℥iii 12
M. Sig.: Apply locally.

Baldness.

The following combinations are recommended by "Merck's Report" in the treatment of baldness:

℞. Plumbi acetatis ..... ℥iss 6
Sulphuris precip. ..... ℥ii 8
Tinct. cantharidis ..... ℥i 4
Glycerini ..... ℥ii 60
Alcoholis ..... ℥i 30
Olei citronellæ ..... m. xv 1
Olei bergamot ..... m. viii 50
Aquæ q. s. ad ..... Oi 480
M. Sig.: Apply locally to the scalp; or:

℞. Sulphuris precip. ..... ℥ii 8
Plumbi nit. ..... ℥iss 6
Tinct. cantharidis ..... ℥ii 8
Glycerini ..... ℥ii 60
Alcoholis ..... ℥i 30
Olei lavendulæ ..... m. xxx 2
Olei amygd. (essential) ..... m. iv 25
Aquæ q. s. ad ..... Oi 480
M. Sig.: Apply locally.

Phosphorus in Alopecia.

According to an abstract in "Month. Cyc. of Med.," phosphorus in small doses is of great service in the treatment of alopecia areata. The following formula is recommended:

℞. Phosphori ..... gr. i 06
Olei olivæ, q. s. ad. solutio
Then add:
Acidi arsenosi ..... gr. ii 12
Excip. q. s.
M. Ft. pil. No. cxx. Sig.: One pill to be taken daily for two months, followed by an intermission of one week until three hundred pills are taken, when a cure is generally effected.

Substitutes for Potassium Iodid.

On account of the after-effects produced by the administration of potassium iodid, Solis-Cohen reviews, in "Amer. Med.," other preparations which may be substituted for this preparation. Among these substitutes he mentions iodized starch containing 5 parts of iodin and 95 parts of starch given usually in doses ranging from grains 3 to 10 (.2-.6). However, it has been given in gradually-increased doses reaching ½ ounce (15.). Locally this preparation is of service in the treatment of sluggish ulcers from any cause.

Iodoform may also be given as a substitute for potassium iodid in doses ranging from 30 to 80 grains (2.-5.).

Locally it may be applied as follows:

℞. Iodoformi ..... ℥iv 15
Balsami peruvianæ ..... ℥ii 8
Lanolini ..... ℥ii 60
M. Sig.: To be applied locally.

Iodol is not infrequently given in doses ranging from 6 to 30 grains a day (.4-2.). In the treatment of angina pectoris the author quotes the following formula employed by Maldorescu:

℞. Iodol ..... gr. xxx 2
Ext. glycyrrhizæ, q. s.
M. Ft. pilulæ No. xx. Sig.: Two pills twice a day.

Iodolene, a compound of iodol and albumin, contains about 10 per cent. of the former preparation. It is said to possess the antisyphilitic properties of the iodids and is more lasting in its effect, as it is more slowly eliminated. It may be given in doses ranging from 20 to 30 grains (1.20-2.00) repeated four or five times a day.

Iodipin, which is a combination of iodin in oil of sesame, is one of the best substitutes for the iodids, as it contains about 10 per cent. of iodin. It is said by the author not to be broken up in the stomach, but the iodin is liberated by the intestinal juices or, according to some authors, absorbed unchanged, and liberation takes place in the tissues. Consequently, its effects, as in the case of iodolene, are very much prolonged. This preparation produces no gastric disturbance and gives no symptoms of iodism. It is absorbed very rapidly by the system, as it has been detected in the urine within fifteen minutes after its administration by the mouth, but it has

rarely been detected in the feces, which fact shows that it is practically all taken up by the system.

It is recommended in all the diseases in which potassium iodid is indicated, as in syphilis, asthma, neuralgia, arteriosclerosis, etc. It is best to prescribe it in the form of an emulsion, as follows:

R. Iodipin	℥ii	60
Pulv. acaciæ	℥i	30
Aq. menth. pip.	℥iii	90
Syrupi simp.	℥i	30

M. Ft. emulsio. Sig: One to two teaspoonfuls at a dose.

"Merck's Archives" recommends its administration in the following form:

R. Iodipin (10 per cent.)	℥iii	90
Yolks of two eggs		
Pulv. cacao	℥i	4
Saccharı	℥ii	8
Olei cinnamomi	m. ii	12

M. Sig.: One to two teaspoonfuls two or three times a day.

It is frequently given in the form of a hypodermic injection in doses ranging from 20 to 40 minims. The preparation must be placed in warm water previous to injecting, as the oil is too thick for hypodermic use when cold. It serves as a good test of the motor power of the stomach, as it is not absorbed by the stomach.

Medicolegal.

Medical Attendance on Husband a Family Necessity.—The Supreme Court of Nebraska holds, on rehearing, in the case of Leake vs. Lucas, that the husband, while living with his wife, is part of the family, and medical attendance of which he stands in need is a family necessity, within the meaning of section 1 of chapter 53 of the Compiled Statutes of Nebraska, which makes the unexempt property of a married woman liable for the payment of all debts contracted for necessaries furnished her family after execution against the husband for such indebtedness has been returned unsatisfied for want of property. And it holds that where medical attendance is furnished the husband under the circumstances above stated, and while the family are residing in Nebraska, and the family afterward remove to a sister state, a judgment against the husband in the state to which he has removed, and the return of an execution unsatisfied, is a sufficient compliance with the Nebraska statute to entitle the creditor to proceed against the wife (in Nebraska) for the collection of his demand.

Privilege Can Not Be Waived by Widow.—Section 834 of the New York Code of Civil Procedure provides that, "a person duly authorized to practice medicine or surgery shall not be allowed to disclose any information which he acquired in attending a patient in a professional capacity, which was necessary to enable him to act in that capacity." Section 836 provides that, "a physician or surgeon may, on the trial or examination, disclose any information as to the mental or physical condition of patients who are deceased which he acquires in attending such patient professionally, . . . when the provisions of section 834 have been expressly waived on such trial or examination by the personal representatives of the deceased." The words "personal representatives," as used in section 836, the First Appellate Division of the Supreme Court of New York holds, in the case of Beil vs. Supreme Lodge, Knights of Honor, apply only to executors and administrators. Consequently, where a widow was seeking to recover on a mutual benefit certificate made payable to her, but which she could not do under the terms thereof without proving that at the time her husband committed suicide he was in a state of delirium, resulting from illness, she was not entitled to call as a witness therefor the physician who attended him at or immediately prior to the time of his death, she not having the power to waive the prohibitions of section 834, not being the personal representative of the deceased within the meaning of section 836.

Utilizing Refuse from Consumptive Sanitarium.—The Third Appellate Division of the Supreme Court of New York says that the gist of the crime of which there was a conviction in the case of People vs Van Fradenburgh, was the disobedience of a lawful order of a board of health. Unless, then, the order disobeyed was one lawfully made by the board of health, the accused had been guilty of no crime. The order was one forbidding him from drawing into the corporate limits of the village any more refuse from the table and kitchen of a sanitarium for consumptives, which he had been collecting for feed for his chickens and hogs. There was no proof that this refuse from the sanitarium for consumptives was any more dangerous to the community when exposed than the refuse from any hotel, and the court says that it can not assume such to be the fact in sustaining this conviction. Has the board of health, then, the right to forbid a person from bringing into the village refuse from a hotel or any other public house? the court asks. Under the evidence in this case, it says, such refuse, while it is fresh, is wholesome food for hogs and fowls. The menace to the public health lies in permitting it to remain until it decays and throws off a stench which is prejudicial to the comfort of the community, if not to its health. As long, therefore, as the mere bringing into the community of fresh refuse from a public place has in it no element of threatened danger to the public health or comfort, the court is unable to see by what authority the board of health is permitted to prohibit the same. For this reason, it is added, the people have failed to prove the commission of a crime, and the judgment of conviction must be reversed.

County of Legal Residence Must Pay for Quarantine.—Section 7059 of the General Statutes of Minnesota of 1894, which provides for quarantine in case of smallpox, or other contagious disease dangerous to the public health, makes the expense a charge on the county in which the person has a "legal settlement," if he, his parents, guardian or master be not able to pay therefor. In the case of the Town of Louriston vs. Board of Commissioners of Swift County, a man and his family had resided in a county continuously for more than one year, and then moved to an adjoining county and became residents thereof. Then, inside of a month or so, some of the members of the family were taken sick with smallpox, and the board of health of the town caused the family to be quarantined and cared for. They never had been paupers or a public charge, but were unable to pay the expenses connected with their confinement and treatment. The town sued the county in which they had formerly resided for the expenses connected with their quarantine, care and treatment. But the Supreme Court of Minnesota holds that county was not liable, under section 7059 above referred to, for the reason that the family had acquired a legal residence in the other county at the time the expense was incurred. It says that the quarantine of those attacked with the disease, their care and maintenance, is an incident to the control of the contagion, and it naturally follows that if such persons are at the time residents of the county, such county is to bear the necessary expense of their care, provided the people themselves, or their relatives and representatives, are unable to do so. These acts are independent of and have no relation to the poor laws, except when the persons stricken with the disease were paupers or dependents while still residents of the former county. The words "legal settlement" are synonymous with "legal residence."

What Constitutes "Sound Health."—In the case of Packard vs. Metropolitan Insurance Company the policy sued on contained a provision "that no obligation is assumed by the company prior to the date hereof, nor unless on said date the insured is alive and in sound health." The Supreme Court of New Hampshire says that it must be presumed that the parties intended by this provision what the words used by them ordinarily signify in common speech. What was meant by the words "sound health" was, evidently, not perfect health. "We are all born with the seeds of mortality in us." No definition can be given to these words that will apply in all cases. A mere temporary indisposition or ailment would not ordinarily be regarded as rendering the health unsound, within the meaning of these words when used in an insurance contract. Speak-

ing generally, they mean the absence of any vice in the constitution, and of any disease of the serious nature, that have a direct tendency to shorten life; the absence of a condition of health that is commonly regarded as disease, in contradistinction to a temporary ailment or indisposition. Whether, in a given case, a person is of sound health, must, of course, depend on the circumstances of the case. The insured in this case was a boy of 10 years of age. After he was examined by the company's physician, and before the date of the policy, he "fell sick of a disease of the heart," from which he died within six months. Although the disease was one which it was said was not infrequent among children, and is frequently outgrown, it could not reasonably, the court says, be regarded as a temporary ailment, or as not of a serious nature. A person having such a disease would not be regarded as in sound health. The fact that the boy's mother, who was suing, was not aware of the nature of the disease, and that its nature was undiscoverable except by a physician, did not prevent it from rendering the boy's health unsound. Undoubtedly, the testimony of the mother and others that the boy appeared to be in good health would be competent evidence on the issue of soundness, but it would not be conclusive. The testimony of physicians concerning the condition of his health, discovered by their examinations of him, would also be competent. If the boy was sick with consumption at the date of the policy, no one would say that he was in sound health.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical News, New York.

April 11.

1 *Some Problems in the Major Surgery of the Kidneys, with a Report of Cases. Joseph A. Blake.
2 *An Operation for Paronychia. Sinclair Tousey.
3 *The Geographic Distribution of Uncinariasis in the United States. William R. Stone.
4 *Report of a Case of One-Sided Dislocation of the Mandible. Reduced by a Novel Manipulation. Frank Woodbury.
5 Eye Affections Complicating and Resulting from Rheumatism. Ralph Opdyke.

1. **Kidney Surgery.**—Blake's paper is largely a report of cases, but he points out the advantages of nephrectomy over nephrotomy in pyonephrosis and hydronephrosis, allowing that the other kidney is in a good condition, and illustrates his points by cases. The dangers of so-called conservative surgery, namely, nephrolithotomy and pyelolithotomy in infected kidneys, are, he thinks, markedly emphasized by statistics, especially those of Israel.

2. **Paronychia.**—The operation described by Tousey consists in separating the attachment of the cuticle to the dorsal or exposed surface of the nail to a sufficient extent to permit the escape of the pus and the introduction of a stick of nitrate of silver to disinfect the sulcus. Its advantages over removal of the nail are simplicity and painlessness.

3. **Uncinariasis.**—Stone finds that only about 38 cases have actually been reported in this country, and at least 18 of them were contracted outside the United States. This discovery by Stiles of *Uncinaria americana* is, however, of importance, and it appears from the testimony of Dr. A. J. Smith of the University of Texas that about 8 per cent of the students there examined were infected with the parasite.

4. **Jaw Dislocation.**—Woodbury reports a case of onesided dislocation in which he replaced the mandible with the following manipulation: Seizing the ramus and angle of the bone with the left hand, he placed his thumb in front of the coronoid process. While pressing the bone downward and backward he asked the patient to gently open and close the mouth several times and then, at a time when the mouth was nearly closed, acting under impulse, he struck the left side of the chin a sudden gentle blow with the knuckles of his right half-closed hand. The return of the condyle to its place was announced by an audible click, to the great satisfaction of the patient. He thinks the gentle motions of opening and closing the mouth worked the condyle gradually back, and the sudden application of force took the muscles by surprise while they were, so to speak, off their guard, and the condyle with its articular cartilage slipped over the obstruction into the glenoid fossa, before the muscles had time to contract. He thinks the method will be useful in cases where the dislocation is confined to one side.

Medical Record, New York.

April 11.

6 *The Technic of Nephropexy, with Special Reference to a Method of Attaching the Kidney as Nearly as Possible in Its Normal Position. Ramon Guiteras.
7 *Intranasal Obstruction and Its Treatment. H. Hoyle Butts.
8 *Cases of Morphinism in Which the Drug Was Immediately Withdrawn. Margaret S. Halleck.
9 *Bronchopneumonia. Joseph N. Study.
10 *The X-Ray and the Finsen Light in the Treatment of Lupus. A. D. Rockwell.
11 *The Treatment of Ringworm. George T. Jackson.

6. **Nephropexy.**—Guiteras outlines the various methods employed and gives his own technic. He denudes but one-half of the posterior surface of the kidney, that nearest the convexity, leaving the anterior surface intact. He then passes his sutures through and under the reflected capsule in such a way that they hold the organ securely during the formation of adhesions that goes on after the operation, and ties his sutures over the muscles and fasciæ in such a way as to bring the kidney into close apposition with the parietes, as nearly as possible at the normal level and in its normal horizontal angle, with the convex border pointing outward and slightly backward. The paper ends with an extensive bibliography on the subject.

7. **Nasal Obstruction.**—The various causes of nasal obstruction and the means of their relief are described by Butts. He believes in cases of hypertrophic rhinitis that there is nothing equal to the judicious application of the electrocautery for obstruction or hypertrophic tissue. In case of septal spurs he would remove them when they impair the respiratory function and whenever they impede drainage from accessory sinuses or nasal fossæ, or when they are in contact with opposing structures. For deformities of the cartilaginous septum he believes in the Asch operation. Septal abscess and nasal myxomata are also described, and he gives the technic for various operations.

8. **Morphinism.**—Five cases are reported of the rapid cure of the morphin habit by the use of hyoscin and strychnin injections, the former in doses of 1/200 of a grain, the latter 1/60 of a grain, with codein sulphate ¼ of a grain. Several cases are reported, some of opium smokers and others who had taken it by the mouth or hypodermically for seven to ten years. Halleck believes this method is better than the gradual reduction. Strychnin stimulates while the morphin is being eliminated, while the nausea, restlessness, insomnia and pain are cared for by the hyosin and codein. In the cases reported there seems to have been very little suffering from the rapid treatment, which lasted from one to five or six days.

9. **Bronchopneumonia.**—Study believes in the contagiousness of this condition, and would treat it by placing the child in the best conditions of light, ventilation and temperature, using turpentine and lard or camphorated oil; calomel to move the bowels, opium to quiet, in the smallest possible dose, and hydrotherapy as a rule for the high temperature, keeping up, of course, good nutrition by proper diet and nursing if the child is of the proper age.

10. **Lupus.**—Rockwell briefly reports a case in which a certain amount of benefit was derived from the Finsen light treatment, and the condition remained stationary, but was later cured by the use of *x*-rays. He questions whether this experience might not have been reversed in some cases from idiosyncrasy, etc. The question of the difference between actinic and *x*-rays is an interesting and important one in which the personal equation must often be the determining factor.

11. **Ring-Worm.**—The reason of the intractability of ringworm of the scalp and beard is that the fungus grows down into the hair follicles, which can not be reached by the ordinary remedies. In looking for a suitable excipient, goose grease appeared to Jackson as about what he wanted. He found that a dram or more of the crystals of iodin added to an ounce of

goose grease will make a most effective remedy for ringworm. He applies it twice a day until it produces a reaction, and then once a day. In two or three weeks the hair falls out of the patch, which becomes bald for a time. After a time the hair grows in and the patch is well. If there is too much reaction, with swelling, the remedy may be suspended for a few days and salicylated oil of a 3 per cent. strength used. As soon as the reaction subsides the remedy should be used again. This method has been practiced in the Vanderbilt Clinic with good results.

American Medicine, Philadelphia.

April 11.

12 Congenital Absence of the Clavicles, with Photograms and Radiograms—Cleidocranial Dysostosis. Harry M. Sherman.
13 *Degeneration of the Erythrocyte. John C. DaCosta, Jr.
14 *An Operation for Cicatricial Contractures of the Upper Extremities. A. H. Traver.
15 *Glycerol of Iodin—An Old-New Remedy for Tuberculosis, Chronic Bronchitis, Chronic Pleurisy, Goiter, etc. T. W. Williams.
16 Cancer of Male Breast: Report of a Case. Edward A. Balloch.
17 Congenital Absence of Both Inferior Recti Muscles. Edward Stieren.
18 Glimpses of the Practice of Medicine and Diseases in the West Indies. (Concluded.) Nicholas Senn.
19 How Can the Standard of the Medical Profession Best Be Raised? George V. N. Dearborn.

13. **Degeneration of the Erythrocyte.**—After an elaborate description of the changes which occur in the red cells in various conditions of disease, Da Costa summarizes as follows:

1. The viscosity of the erythrocytes is influenced by cellular and plasma alterations, the nature of which is obscure. The viscosity is exaggerated by the direct influence of various toxic agencies, and is diminished in many anemic states. This phase of cellular pathology is interesting from an experimental point of view, rather than as a finding of clinical application.

2. Simple decoloration illustrates the earliest retrograde change affecting the erythrocytes, and its intensity generally corresponds to the severity of the anemic process by which it is excited. The change may exist alone, as in the milder forms of anemia, or it may be combined with graver necrotic degeneration of the cells, in anemias of greater severity.

3. Deformities of shape and size are common to all pathologic blood, the degree to which such changes develop being related to the intensity of the blood impoverishment. Megalocytosis is a more serious sign than microcytosis.

4. Atypical staining of the erythrocytes betrays an impairment of function, and, as a rule, is found most commonly in corpuscles whose hemoglobin content is subnormal. It is most striking in anemias of the primary type.

5. The prevalence of megaloblasts indicates a fetal reversion of the bone marrow, and stamps the blood changes as pernicious, except in the anemias symptomatic of *Bothriocephalus latus* infection and of nitrobenzol poisoning. The presence of megaloblasts indicate a severe anemia, but not necessarily one of fatal outcome.

6. Granular basophilia, whatever may be its exact origin, should be interpreted as a sign of degeneration. It is a constant blood finding in but a single condition—lead poisoning—but is associated with many diseases involving a variable degree of blood deterioration. The experimental basophilia excited by the administration of preparations of hemoglobin warrants a doubt as to the wisdom of using such medicaments as substitutes for iron in the treatment of anemia.

14. **Cicatricial Contractures.**—Traver reports a case where extensive cicatricial contractures of the upper extremity were cured by denudation of a portion of the cicatrix and substitution of a flap taken from the side of the chest. Successive operations by this method made a useless arm a practically normal functionating member. A full understanding of the article requires seeing the diagrams which accompany it.

15 **Glycerol of Iodin.**—Williams calls attention to the value of glycerin as an excipient for iodin, instead of alcohol, for local application. It has the advantage of leaving no stain on the skin and producing only slight local irritation while absorption is more complete. It can not be used as freely as the tincture because it produces symptoms of iodism more quickly.

Philadelphia Medical Journal.

April 11.

20 The Recent Epidemic of Typhoid Fever in Ithaca, New York. Mervin T. Sudler.
21 *Some Remarks on the Treatment of Croupous Pneumonia. C. S. Bradfute.
22 *The Diagnosis and Treatment of Incipient Pulmonary Tuberculosis. H. Edwin Lewis.
23 *A Plea for the Use of Less Drugs in the Treatment of Typhoid Fever. J. K. P. Bowen.
24 *The Postorbital Limbus: A Formation Occasionally Met with at the Base of the Human Brain. Edward A. Spitzka.

21. **Croupous Pneumonia.**—Pneumonia is a self-limited disease tending to recovery, but varying under different circumstances in its severity and the effects of treatment. It is rare, Bradfute claims, in the normal individual. In nearly every case he thinks there is some radical defect, infection or some accompanying pathologic condition which serves to promote the growth of the germ. The pneumococcus alone is not always responsible. The influenza bacillus has been observed, and secondary infection may occur with the staphylococcus or streptococcus. It is not a systemic disease, but a localized infection with secondary systemic disorders due to exaggerated reflex influence and toxemia, and while, as a morbid condition, it is simple and free from obscurity, the indications for therapeutic measures are complex. We should not merely treat the symptoms, but treat the general pathologic state. In the regular typical cases without complications there should be no drug employed that would weaken the vital resistance. The coal tar preparations are especially unscientific, and he particularly protests against the use of digitalis. In cases in which it is necessary to control the abnormal circulatory movement as quickly as possible, he would give aconite, which, however, should be used with great caution—dosage of one to two drops—and not given to the extent of reducing the cardiac beats to the normal rate. Its action should be eliminated at the proper time by strychnin, 1/20 of a grain dose if necessary. At the beginning of treatment the bowels should be opened by calomel, mild glycerin suppositories or a seidlitz powder. The principal drugs that are indicated in treatment are strychnin, codein, ammonium and alcohol, the first two as nerve stimulants; ammonium as a cardiac stimulant. Hydrotherapy is also advised for combating the temperature, and he would use it in the method of cold compresses after the Baruch plan, which he describes A rubber sheet to protect the bedding is spread beneath the patient and over this a blanket. A piece of heavy flannel folded to several thicknesses, long enough to encircle the trunk, with about six inches to lap over, is wrung out of cold water, applied snugly to the circumference of the thorax and fastened with safety pins. This is then covered with a piece of dry flannel or part of a blanket and allowed to remain from fifteen to thirty minutes, according to the frequency of applications. When the compress is removed the front and sides of the chest should be rubbed briskly with a soft towel for a few seconds and the thorax enveloped in dry flannel. If the temperature is very high and intractable, above 104 F., these compresses should be wrung out in ice water and applied every half hour until there is a fall. They should not be applied, however, when the rectal temperature is 103 F. or less, for any chilling of the body is to be avoided. He insists on the constant and frequent administration of nourishment by liquid food, six ounces of milk every two hours as a standard rule. The alimentary tract should be kept free from decomposing food. He advises 5 grains of naphthalin twice daily from time to time, keeping the bowels open with calomel and sodium phosphate. Alcohol should also be used as a food. Half an ounce of whisky every two hours is usually sufficient, but when an odor appears in the breath the drug should be stopped and in every case diminished in dosage at the earliest possible moment to avoid establishing the alcohol habit.

22. **Incipient Tuberculosis.**—Lewis points out the principal symptoms indicating a tuberculous process, no one alone being sufficient. He lays stress on the importance of temperature, pulse, usually increased in frequency, but decreased in force, cough which is constant early in the disease, loss of weight, dilatation of the pupil and a tendency to hoarseness without apparent cause. The physical signs and hemoptysis are not sufficiently reliable in the early stages. Sputum examinations frequently repeated are important, though he has seen patients who have never shown bacilli even to death, though postmortem and inoculation experiments proved the diagnosis. He considers that there is some danger in the tuberculin test in spite of the experience reported by others. From his own observations and experience he thinks there are safer methods. Treatment is dwelt on in some detail. The importance of open air, watching the temperature range and regulating exercise accordingly, proper attention to nutrition without crowding the digestive organs, the use of strychnin in rather larger doses than ordinarily administered or in increasing doses up

to 1/10 of a grain three times a day, then going back again to the initial dose. Arsenic is the next most important remedy, and he finds dimethyl arsenate of soda the most efficient in doses of ¼ to 1 grain three times a day. To relieve the cough he would give guaiacol with heroin. He has lost faith in creosote. Atropin, agaricin and picrotoxin are each efficient in relieving night sweats, but an alcohol bath and a rub down at bedtime is often excellent. Internally, alcoholic stimulants are not advised. For inhalation he would use soothing antiseptic vapors. Numerous remedies are recommended, he says, but an especially eligible combination is one of iodin, tincture of benzoin, oil of cinnamon, oil of eucalyptus and albolene. In conclusion he remarks that the cure of incipient pulmonary tuberculosis is not the elusive phantom that it was ten years ago.

23. **Typhoid Fever.**—From a general discussion of the subject, Bowen lays down the following treatment of typhoid, physiologic and medicinal:

1. Rest; maintain the horizontal position to save the heart strength and do not endanger the intestines if complicated by congestion, hemorrhage or perforation; regular change of position in weak patients. Cleanliness, plenty of pure air and light, cheerful, inviting and quiet surroundings, as far as possible. No food usually to be given during the period of anorexia or first week or ten days of fever; then given more freely, as the case may demand, usually from one to three pints of buttermilk daily, plenty of pure water; warm sponge bath with massage of skin and muscles, hot water to abdomen for pain, cold pack for hyperpyrexia and delirium in some cases. Mental rest, be specific and symptomatic, avoid negative directions to nervous patients. Psychotherapy, also, is an important factor in vasomotor disturbances, which effects normal metabolism and repair of lesions, as well as in the so called functional disturbances. Avoid showing any signs of overanxiety by word or act, if possible. Inspire confidence, if you can; if not, retire at once. Serumtherapy should be employed if ever discovered and proved.

2. No drugs as a routine, except external antiseptics and for mouth and nose and some complications. Calomel may be given in the beginning, if indicated by a pale, coated tongue and constipation. Atropin if evidence of much congestion of intestines and pale skin, but not to be continued long; atropin is also valuable in some cases of meteorism, as it may correct the atony of the muscular tissues of the intestines. Castor oil is the best laxative and usually the best remedy for meteorism, necrosis and ulceration, and to be used throughout the case. Turpentine internally for meteorism and externally with hot water to abdomen for pain, also in enemata. Avoid using too freely salines for distension of bowels with liquids or for congestion or in plethoric conditions. Diluted hydrochloric acid if tongue is pale and flabby. Morphin and atropin for sleeplessness in some cases; also for severe pain or hemorrhage or active delirium, but should be used cautiously. Strychnin may be indicated, especially during convalescence. Acetozone may be tried as a general antiseptic. Greater skill is required to carry out successfully a general physiological treatment than in the mere drug giving, and the successful application of these principles will depend much on the judgment and tact of the physician. Success in the healing art rests on the knowledge of the principles, and clinical experience.

24. **Postorbital Limbus.**—Spitzka describes a curved, welt-shaped eminence, lying in apposition with the temporal apex on the orbital surface, which is demarked from the rest of the orbital region by a more or less distinct incisure. He has found this in a native of Japan, in two brains of female Papuans and in the brain of a distinguished American scientist. He has found it described nowhere else as far as he has been able to observe, excepting in a Laplander by Retzius, who speaks of it as a post-orbital gyrus.

New York Medical Journal.

April 11.

25 *Intestinal Obstruction. John B. Harvie.
26 *On the Physiological Action of Silver Sulpholchthyolate. Horatio C. Wood, Jr.
27 *Practical Points on Intubation of the Larynx for Croup, with a Report of 36 Cases. (Concluded.) Fielding L. Taylor.
28 Food and Nutrition in Disease. L. H. Watson.
29 *Methods Which Render Some Therapeutic Agents More Palatable. Samuel E. Earp.
30 The Management of Occipitoposterior Positions of the Presenting Head. (Continued.) Walter J. Cavanagh, Charles Norton Barney and George B. Twitchell.

25. **Intestinal Obstruction.**—Hernias are the most common causes of intestinal obstruction and should always be looked for. They are usually overlooked especially in cases of internal hernias. They may often occur without distension or particular discomfort, making the case exceedingly obscure. Harvie notes these points and reports a case of obstruction and autorelief by the passage of a very large gallstone. The most common form of chronic obstruction will be found to depend on some malignant growth. This is the principal subject of his article. As soon as the diagnosis is made, radical operation would seem advisable, even before the diagnosis is complete. Two cases are reported, both showing a gradual onset with well-marked clinical symptoms. The idea of surgical interference seems to have been ignored for a considerable time in both cases The operative histories showed the practicability and almost positive favorable outcome if early operation had been done.

26. **Silver Sulphoichthyolate.**—This substance, known also as ichthargan, has been studied by Wood, who finds that it is readily broken up by hydrochloric acid, and is, therefore, unabsorbable as the sulphoichthyolate in the stomach. Its toxic power seems to be very much less than that of silver nitrate, and it is less irritating. The harmlessness of large doses depends on the slowness of absorption. A number of experiments is reported and show that the action of the compound is similar, at least qualitatively, to that of other silver salts. It has the advantage over silver nitrate in that it is locally less irritant and decidedly less poisonous.

27. **Intubation.**—The concluding portion of Taylor's article is entirely given up to reports of cases.

29. **Unpalatable Drugs.**—Earp gives several points in regard to making unpalatable drugs less disagreeable to the patient and insists on the importance of this point. To give castor oil in one dose, perhaps the "castor oil sandwich" is the best method. In the bottom of a glass put a small quantity of glycerin, then the oil, and lastly a little sherry wine on top. Take at one draught. This will also apply to the single dose of cod liver oil. Soda water will also be effective. It will also do for Epsom salts, but the ordinary "soda pop" is better. Quinin is hard to disguise. The preferable method, according to Earp, is to give one grain of tannic acid to each three grains of quinin in a vehicle of syrup of tolu. The iodid and bromid of potassium and salicylic acid may be given in milk, which also prevents gastric irritation. If copaiba and turpentine are not used in gelatin capsule form, an emulsion flavored with gaultheria comes next in order. For chloral hydrate he thinks peppermint water better than cinnamon. Equal parts of peppermint water and simple syrup make a good solution for salicylate of sodium. Unless there is an objection to the intensely sweet taste, the syrup of glycyrrhiza answers best for sodium salicylate. After flushing the mouth with a little whiskey the medicinal oils may be taken immediately, and the disagreeable taste is not so perceptible. A few grains of table salt taken on the tongue will produce a copious flow of saliva, and then, if swallowed with medicine which has an objectionable taste, it may be somewhat disguised. Care should be taken as regards chemical incompatibility in these cases. If lemon ice is held in the mouth for only a moment, a teaspoonful of a preparation which would otherwise seem nauseous may be taken with very little unpleasant effect. When the secretions are inactive and the membranes parched and dry, bitter principles are apt to produce the very worst effect and leave an unpleasant aftertaste. Sometimes simply a drink of water will obviate this condition, or perhaps a lump of ice held in the mouth or water acidulated with dilute phosphoric acid, to be taken before the medicine. A combination of syrup of red raspberry and glycerin makes an unusually palatable vehicle. He also recommends sodium bicarbonate with salicylic acid and sodium salicylate.

Boston Medical and Surgical Journal.

April 9.

31 *Dry Hot Air as a Therapeutic Agent, with Demonstration of the Body Treatment. Clarence Edward Skinner.
32 *The Rôle of Atmospheric Pressure in the Hip-Joint. Seabury W. Allen.
33 *The Doctor in the Navy. A. J. Nute.
34 A New Modification of Tarnier's Axis Traction-Rods. L. V. Friedman.
35 Death from a Single Vaginal Douche; Report of Two Cases. G. De N. Hough.
36 The Relative Frequency of Multiple Sclerosis. E. W. Taylor and J. W. Myer.

31. **Dry Hot-Air.**—Skinner reviews the uses of dry hot air in various disorders, first of all rheumatism, in which he finds it useful to give some salicylic compound as an adjunct. The hot-air applications cause relief of pain, shorten the duration of the disease, lessen the liability to cardiac involvement owing

to the rapid control obtained over the pathologic condition, prevent the danger of reinfection, lessen the amount of drug medication the patient is obliged to take, and in many cases intractable to other measures it is curative. When judiciously applied it is never productive of vicious after-effects. Sprains are also readily amenable to this agency. In many cases of arthritis deformans it is a valuable adjunct to treatment, if not a curative measure by itself. From six months to a year or more is usually required to produce a cure, but he has seen cases cured in a month. Pneumonia is another disorder in which this treatment is of value, as also in local septic infection, chronic and acute nephritis and a number of other diseases which he lists. It acts as a direct stimulant to cell metabolism in the part treated, and produces reflex local hyperemia which with stimulation of the trophic nerve supply results in increased nutrition. If hyperleucocytosis is not already present the number of leucocytes is rapidly increased from 15 to 20 per cent, though if it is present there may be no increase at all. The red blood cells are increased from 10 to 20 per cent. The quantity of urine passed is increased as well as the amount of excretion of urea. The mouth temperature rises from 1 to 5 F., the pulse is accelerated, respiration deepens, and the capillary areas become injected. Perspiration is markedly increased and more acid. The oxidation of effete matters and the general functional activity of every organ and tissue in the body is augmented without and subsequent reactionary debility. Skinner describes the technic and remarks as regards the criticism that the results are not permanent, that in cases in which the condition apparently came back after treatment, the thermal agent was not properly supported by later treatment.

32. **Atmospheric Pressure in the Hip Joint.**—Allen reviews the statements as to the atmospheric pressure in the cotyloid cavity and has experimented with cadavers, successively cutting the muscles, capsular ligament and cotyloid ligament. The results of his experiments are that what holds the bone together is primarily the cotyloid and secondarily the capsular ligaments (in life elasticity of the surrounding structures helping them out), and that the air pressure need not be considered.

33. **The Doctor in the Navy.**—Nute gives a general description of the methods of becoming an assistant physician in the Navy and the advantages of the service.

Cincinnati Lancet-Clinic.

April 11.

37 *X-Ray Phenomena and Phenomena Not Due to X-Rays. Percy Shields. For What Conditions and How Should the X-Rays Be Used? Edw. H. Shields.
38 Surgery of the Prostate, Pancreas, Diaphragm and Spleen. (Surgery of the Pancreas). B. Merrill Ricketts. (Continued.)

37. **The X, or Cathode Rays.**—According to Drs. Shields it is not the *x*-ray but the cathode ray which is curative in malignant disease. They summarize their statements as regards the phenomena due to the *x*-rays and those not due to this agent as follows:

1. Relief of pain is due to the action of a high-tension current and connected in no way with *x* or cathode rays.
2. Cathode rays are the therapeutically active agents in the treatment of disease.
3. Affections beneath the surface, as deep-seated carcinoma, are in no wise affected by *x*-rays or cathode rays.
4. The only phenomenon which can be ascribed to *x*-rays is their ability to penetrate thick opaque bodies.
5. Bactericidal properties of *x* and cathode rays are *nil*.

As regards the therapeutic uses and methods they offer the following:

1. Superficial growths, both benign and malignant, can be relieved and often cured by the escharotic effect of the cathode ray.
2. Any lesion of the skin which can be relieved or cured by causing a superficial sloughing constitutes an indication for the use of the cathode rays.
3. Neither the *x*-rays nor the cathode rays affect in any degree benign or malignant disease beneath the surface.
4. Diseases due to bacteria or fungi are not cured by the *x*- or cathode ray.
5. Painful neuralgic affections are usually benefited, sometimes permanently, by the use of the high-tension current, but the relief is in no way associated with the use of the *x*- or cathode rays.

New York State Journal of Medicine, New York.

April.

39 Our Needs—The Ideal Physician. J. W. Grosvenor.
40 The Significance of Oxaluria. J. Bergen Ogden.
41 The Prognostic Significance of Albumin in the Urine. Edward W. Lambert.
42 *The Symptomatology of Colds. George F. Cott.
43 *The Treatment of Colds. A. Alexander Smith.

42. **Colds.**—Cott notices the symptoms to which patients give the name of colds and points out that they are never of primary origin. We should remove their cause and the patient will then be free from the symptoms described.

43. **Treatment of Colds.**—Taking the treatment as usually understood by the laity, Smith holds that bathing the upper extremities, even including the head, is a certain amount of protection against taking cold. He is a strong believer in the communicability of colds, and is confident that in many cases fatigue and exhaustion diminish the resistance and render the persons more liable. The first thing he does is to take the temperature, and if it is above 100 F. he insists on the patient remaining at home, and better still in bed, if only for two or three days, which in the end saves time and the patient is much more comfortable. He is also sure that the traditional and orthodox use of opium and quinin, not in very large doses, but say 5 gr. of quinin, with 10 gr. of Dover's powder, with possibly a hot drink and hot mustard foot bath are often efficacious Frequently no further treatment will be required. The almost universal habit of giving cathartics at the beginning of treatment is to be commended. He also mentions the rhinitis tablet which has been in vogue, consisting of quinin, camphor and belladonna. If these can be taken during the first six hours, a half-strength tablet every hour for six doses, and then once every three hours until six more have been taken, it will often break up the cold. If, however, the cold has already lasted twenty-four hours, he prefers to use other remedies. It is necessary to produce at least slight physiologic effects of the belladonna with these tablets. Another method he has found very satisfactory is alkali given at the earliest possible moment, a dram of bicarbonate of soda in half a glass of water, and repeating the dose in one hour. If after twenty-four hours the cold does not seem to be better, this alkaline dose should be repeated. The salicylates are often useful, and he has seen cases where the inhalation of camphor fumes, with a few drops internally, gave great relief. The combination of one of the coal tar preparations, preferably phenacetin or acetanilid in small doses, with quinin often proves very beneficial when the skin is dry and hot and there is stuffiness of the nose, with muscular pains and headache. They seem, however, to prolong convalescence. In the majority of simple catarrhal colds no treatment except attention to the simplest rules of hygiene is required. In colds of moderate severity with a tendency to an excess of mucopurulent secretion, he has found great benefit from the creosote preparations. Carbolic acid has disappointed him. In children small doses of tincture of aconite will often be found useful. He gives it in doses sufficiently small to allow its repetition every hour and prefers it to any of the disagreeable tasting preparations for children under twelve years of age. He does not believe in the local treatment of colds. If there is a special tendency to recurrence he has seen much benefit from the use of tincture of chlorid of iron for two or three days only in large doses. He uses in such cases twenty minims every two hours, but after the second day it produces severe headache and must be discontinued. Another agent of value is cod liver oil In convalescence it is often of the greatest service to produce an absolute cure, and often prevents recurrence. Where the patient will not take this he gives quinin in small doses or some of the vegetable bitters.

Archives of Pediatrics, New York.

April.

44 *The Medical Treatment of Tuberculous Peritonitis in Children. Leonard Guthrie.
45 *Autopsy Statistics at the Children's Hospital with Reference to Tuberculosis and Its Etiology. Alfred Hand, Jr.
46 *Sterilized Milk, Pasteurized Milk or Clean Milk? E. W. M. Brown.
47 Brachial Monoplegia in the Course of Chorea Minor. Francis Huber.
48 Report of a Case of Sinus Thrombosis Resulting in Extensive Cerebral Hemorrhage in an Infant Fifteen Days Old—Sigmoid Fusion of the Kidneys. Samuel M. Hamill.
49 *Note on the Temperature Curve of Acute Croupous Pneumonia in Children. Charles Goodwin Jennings.

50 A Case of Pneumonia, Probably Due to Streptococcus Infection. Walter L. Carr.
51 A Case of Retropharyngeal Adenitis and Abscess; Extreme Malnutrition; Recovery. John J. Cotter.

44. **Tuberculous Peritonitis.**—Guthrie finds that in 41 cases of tuberculous peritonitis treated at the Paddington Green Children's Hospital 14 underwent laparotomies and 7 of these died, while of the remaining 27 treated medicinally, only 4 were fatal. He says that as regards medicinal treatment we can not kill the tubercle bacillus. Arsenic might possibly affect the course of tuberculous peritonitis, but he knows of no other drug. We have chiefly to treat the symptoms. The patient is relieved of pain by rest in bed and local applications. Flatulency and indigestion need a careful diet. Diarrhea needs no active treatment unless profuse. A loaded rectum should be cleared by enemata rather than a purgative, but an occasional dose of castor oil or compound licorice powder may be given with no evidence of ulceration. We must remember, however, that ulceration may exist without such evidence. For ascites there is a question whether diuretics are indicated, but they can hardly be recommended as a routine practice. Vomiting is seldom excessive unless intestinal obstruction occurs, and then surgical aid is to be invoked. It is seldom necessary to have the diet entirely fluid. In every case rest in bed, at least in the early stages, is essential. The medicinal treatment consists in simply keeping the patient at rest, giving abundant and nutritious diet, relief of incidental symptoms as they arise, and the advantages of open country air. For ascites in acute cases, unless fluid produces great distention and distress, it is inadvisable to interfere, for if removed it will speedily reaccumulate In chronic cases where there is no tendency to subside, it should be withdrawn. Guthrie's theory is that laparotomy is beneficial in tuberculous peritonitis simply because it lets out the fluid. Dry cases without complications would recover equally well if let alone.

45.—This article appeared elsewhere. See THE JOURNAL of April 18, ¶57, p. 1106.

46. **Milk.**—Brown summarizes his conclusions on the subject of Pasteurized or sterilized milk: Sterilization at 212 F. is of great value because of its unversal practicability. Pasteurization at a temperature of 140 to 158 F. in closed vessels for fifteen minutes is much better, though we must admit that the heating of milk sufficient to kill bacteria does impair its nutritive value to some extent. When obtainable, clean pure milk used raw is much better and there is a rising demand for it. It may be provided in all cities or towns of even moderate size if the profession will demand it.

49. **Croupous Pneumonia in Children.**—Jennings gives temperature charts of five cases of croupous pneumonia, showing the sudden drop of temperature on the second to the fourth day which has confused the diagnosis in many cases. With this drop of temperature there is no change in the respiration or pulse curve, but these both sharply rise at the end of the remission

American Journal of Insanity, Baltimore.

January.

52 *The Insane in Brazil. W. H. Kidder.
53 *A Contribution to the Chemistry of Nerve Degeneration in General Paralysis and Other Mental Disorders. Isador H. Coriat.
54 *Dermatoses of the Insane. James MacFarlane Winfield.
55 *Report of a Case of Dementia Precox with Autopsy. William R. Dunton, Jr.
56 A Case of Abscess Diagnosed as Brain Tumor. Hermon C. Gordinier.
57 A Case of Brain Tumor in a Woman Seventy-eight Years of Age. J. D. Madison.
58 *Acute Paresis, with Report of a Case, the Clinical History and Pathological Findings. Stewart Paton and G. Y. Rusk.
59 *On the Motor Cortex. Clarence B. Farrar.
60 A Case of Metastatic Adrenal Tumors in the Left Midfrontal and Ascending Frontal Convolutions. Walter Channing and Wallace Knowlton.

52. **The Insane in Brazil.**—Kidder gives an account of the principal hospitals as he has observed them at Rio Janeiro, where the care of the insane seems to be according to the most modern scientific methods. In Bahia, on the other hand, the conditions are not so satisfactory, owing to the lack of proper legislation on the subject. The private institutions also in Rio Janeiro are in a creditable condition. In a very large part of the territory there is but little done. Away from the great centers of the population, removal of insane persons to central institutions is practically impossible owing to the expense. The death rate is large, but this is chiefly due to the tardiness in commitment, so that many patients are in a hopeless condition when taken to the hospital. Popular education will have to be depended on to correct this fault. There are also many grave somatic diseases due to the tropical climate which also increase the death rate.

53. **Nerve Degeneration.**—Coriat has elaborately examined the cerebrospinal fluid in a number of cases, including some 14 of paresis, others of melancholia, dementia precox, senile dementia, toxic delirium, alcoholic insanity, etc. He finds cholin present in the fluid in all the paretics and in several of the other cases. It is absent, however, in some cases of melancholia, toxic delirium, senile dementia, alcoholism, epilepsy and dementia precox. In a total of 34 cases it was absent in 11, present in 23. In one case it was also demonstrated in the blood, and in 6 cases of paresis it was found both in the fluid and in the brain tissue. He considers that the findings furnish a safe guide for the differential diagnosis between organic and functional nervous and mental disorders, which can be utilized during life by the method of lumbar puncture. Cholin seems to be present at any period of myelin degeneration.

54. **Dermatoses of the Insane.**—In 1,000 cases of insanity, nearly one-half of these terminal dements, 146 cases of pure skin disease were found, most of them in the dement cases. In some of the latter the disorder was from external causes and contracted before entering the institution. Winfield criticises the statements of alienists regarding cutaneous stigmata. He thinks their remarks in regard to telangiectasis and moles should be amended, though, in fact, such conditions are among the more frequent. Atrophy of the skin and hypertrichosis were the two other disorders most frequently found, and chiefly in terminal dements. The majority of cases occurred in females. The eight men thus marked had thin and coarse beards, but their bodies were thickly covered with hair, especially over the spine. Twenty of the women had a copious growth of thick stiff hairs on their lips and chins. In one case this symptom appeared during an attack of melancholia and disappeared on recovery. The statements made as regards a distinctive odor of the insane should be eliminated, he says, from text-books on insanity. Under modern cleanly treatment there is no cause for such a symptom to exist.

55. **Dementia Precox.**—In the case reported by Dunton, the autopsy showed slight cell changes in the brain, generally distributed, though most marked in the first frontal convolution. The cells showed central chromolysis, perhaps a little pale yellow pigmentation, atrophy, dislocation and swelling of the nucleus, folding of the nuclear membrane and an endonucleolus. The deeper layers were most affected as a rule. The motor cells showed very slight changes There was a slight increase of neuroglia nuclei. Phagocytosis was well marked, and there was considerable cell disintegration. There was no change in the medullated fibers, and no marked vascular changes. While no positive inference can be drawn from the findings, he thinks they may be suggestive in connection with further work.

58. **Acute Paresis.**—From a study of the cases here reported, Paton and Rusk conclude that it is probable that this type is less frequent than has been commonly supposed. To place a case under this class we should not only exclude the subacute or chronic initial period, but the acuteness or chronicity of the pathologic process in the central nervous system must be carefully considered. The pathology is not characteristic. A general and not localized disappearance of the fibers from all cortical areas was observed, but it is not pathognomonic. The neuroglia showed an increase of the cellular elements, with little if any increase of the fibers. There was some overfilling of the blood vessels. Many round nuclei were found in the perivascular spaces. Numbers of plasma cells were observed in the cortex. The character of the changes in the various organs, as well as in the central nervous system, suggested a general intoxication. The vascular changes of the

cortex were not sufficient to account for the degeneration of the nerve elements.

59. The **Motor Cortex.**—Farrar's article is a critical review and summary of the literature on cerebral localizations. He points out that the motor cortex occupies the middle region of the hemispheres, is the earliest to functionate, and the central sulcus gives increased room for its developing elements. This area has been gradually narrowed until now the post-central gyrus is practically excluded. Cajal has described a specific fiber distribution in the precentral convolution, which he thinks serves to differentiate it as the motor type of cortex. That a motor type exists is proven; it is characterized by its unusual width dependent on the marked development of the medium-sized pyramidal cell layer containing the specific plexus of Cajal, by the absence of a clearly-defined granular zone, and by the presence of giant cells in the sixth layer with thicker and denser radial bundles and a richer development of the overlying tangential fibers, which are of maximum density in those parts which contain the greatest number of giant cells. Beyond the limits of the motor area in all directions, one observes a gradual change in the cortical type, the third layer becoming narrower, the fifth wider, and the specific elements of the sixth disappearing. This is recognizing eight layers of the cortex, according to Cajal. The paracentral lobe represents both types of the cortex, the transition taking place below the extremity of the fissure of Rolando, although no surface marking determines the boundary.

Maryland Medical Journal, Baltimore.

April.

61 A Fatal Case of Schönlein's Disease. William T. Watson.
62 *The Prognosis of Chronic Otorrhea. H. O. Reik.
63 *Perforating Wounds of the Crystalline Lens. Geo. A. Fleming.

62. **Chronic Otorrhea.**—The object of Reik's paper is to point out that the cure of chronic suppurative otitis media is not, by any means, as hopeless a matter as is often regarded, and to call attention to the recent methods. He thinks about one-half of the cases call for some surgical treatment, either major or minor, including among the latter removal of polyps and cauterization. In most instances ossiclar necrosis exists and the removal of the diseased bones permits of cure through improved drainage and better cleansing of the tympanum. About 50 per cent. of the one-half requiring surgical operation will be relieved in this way. In the remainder the radical operation will have to be performed, and he thinks that, as the surgeon becomes more familiar with the technic, the 2 or 5 per cent. of cases now recognized as incurable will be still further diminished.

63. **Injuries of the Crystalline Lens.**—Fleming reports three cases, in all of which there was considerable inflammatory exudate involving at least one-third of the lens, yet the latter cleared up with recovery of the normal transparency and function.

Journal of Nervous and Mental Disease, New York.

April.

64 *Reversals of Habitual Motions, Backward Pronunciation of Words, Lip Whisperings of the Insane, Sudden Failures of Volition, Repetition Impulses. S. Weir Mitchell.
65 A Case of Multiple Fibromata Confined to the Internal Plantar Nerve. Wm. J. Taylor and Wm. G. Spiller.
66 A Case of Myasthenia Gravis Complicated by Angioneurotic Edema. Theodore Diller.

64. **Reversal of Habit, etc.**—Mitchell's paper contains some interesting reports of cases of patients with cerebral disorders in which the symptoms were the complete reversal of the usual habitual actions. He mentions one patient with tumor of the brain who pronounced all his words backward, and it was only by close study that this was discovered. Such expressions as "dog ho" and "tacym" were finally interpreted as "Oh! God," and "my cat." There were other cases where paraphasia took the form of the exact reversal of the sense intended. He also notes some peculiar obsessions, many of which seem to have escaped study.

Journal of the Michigan State Medical Society, Detroit.

April.

67 *Intratympanic Injections of Pilocarpin in Chronic Catarrhal Deafness. Robert W. Gillman.
68 Treatment of Puerperal Sepsis. William F. Metcalf.
69 Observations on the Technic of Abdominal Surgery. H. O. Walker.
70 Uremia in the Process of Childbearing. Earl Bigham.
71 *Enteroptosis and Pregnancy. Charles D. Aaron.

67. **Pilocarpin in Catarrhal Deafness.**—Gillman has used intratympanic injections of pilocarpin in many cases of catarrhal deafness from otitis, first introducing the eustachian catheter and forcing the solution into the middle ear by the Politzer bag. He reports two cases, and concludes that it is absolutely effective in certain instances, together with allied treatment; in others it may simply avert the worst consequences, while, perhaps, in the larger number it is ineffective.

71. **Enteroptosis in Pregnancy.**—Aaron reports two cases of enteroptosis which were largely benefited by pregnancy. He remarks, in conclusion, that dispensing with the abdominal bandage, according to the new method, predisposes to enteroptosis, while the ordinary pregnancy assists its cure, and patients in this condition need not hesitate to become pregnant. The disagreeable symptoms of the condition seem to disappear during the pregnancy, and keeping the patient in bed after the delivery and applying an effective bandage is very helpful in its permanent cure, while early convalescence and insufficient support have the opposite effect.

Laryngoscope, St. Louis.

March.

72 *The Anatomy of the Sphenoidal Sinus and the Method of Approaching It from the Antrum. Harris P. Mosher.
73 The Treatment of Abscess of the Septum, with Special Reference to the Prevention of Subsequent Deformities. C. G. Coakley.
74 *The Cold Snare in Tonsillotomy, with Exhibition of Instrument. H. L. Myers.
75 *Alarming Hemorrhage Following Excision of Tonsils and Adenoids. Albert E. Bulson, Jr.
76 The Hypertrophied Faucial Tonsil, with a Report of the Morbid Histology of the So-called Submerged Tonsil. Ellet O. Sisson.
77 A New Mechanical Saw for Intra-Nasal Operations. Edwin Pynchon.
78 A New Postnasal Applicator. J. C. Buckwalter.

72. **The Sphenoidal Sinus.**—Mosher's article is an elaborate, illustrated description of the anatomy of the sphenoidal sinus, and he gives the measurements by the nasal route and the antrum, favoring the latter as a means of approaching this cavity. Through the nose, the lower anterior edge of the face of the sphenoid, as he measures it, is 2¼ inches, and from the middle of the canine fossa, 1½ to 2 inches. The route to the sphenoid by way of the antrum is, therefore, the shortest and most direct. By it the operator has two guides to the lower edge of the sphenoid, the finger in the mouth at the upper rim of the choanæ and the level given by the incision made from the ostium backward through the membranous area. By this route three of the four accessory sinuses of one side can be opened up. The sphenoid sinus of the opposite side can also be opened and, experimentally on the cadaver, in many cases, the frontal sinus. In combined empyemata of the antrum, the ethmoid region and the sphenoid, he thinks this method is the one for reaching the parts. The paper concludes with a very extensive bibliography.

74. **The Cold Snare in Tonsillotomy.**—Myers has used the cold snare for some time, and believes it to be the best instrument for the removal of the tonsils. It is adapted to any tonsils that require removal; the half buried, flattened and hard tonsils which no tonsillotome would reach, are very readily removed by the properly constructed snare, by the additional use of a small tenaculum to draw the tonsil from its bed into the loop. Under local anesthesia it is not a severe operation, and he has never seen the tonsil too hard to be severed. He passes the loop over the tonsil, packing it in with the tenaculum, then slightly contracts the loop to test its hold, then the tenaculum is dropped and both hands are used to close the loop.

75. **Hemorrhage After Tonsillotomy.**—Bulson reports a case of alarming secondary hemorrhage, which he had considered as a rare occurrence, but which he now thinks is a very possible one. The child may be swallowing blood for some time before the hemorrhage is detected. He thinks it was an error of judgment in his case not to pack the post-nasal space before or

immediately after the hypodermoclysis which was used in the treatment, as the secondary hemorrhage caused by the raising of the blood pressure came from that region. Transfusion or saline injection should not be given without knowing that all the bleeding parts are under control

Ophthalmic Record, Chicago.

March.

79 Confessions of a Traveler. (To be continued.) Albert B. Hale.
80 A Modification of the Perimeter, with Electric Transillumination of the Mires. Eugene R. Lewis.
81 *Changes in Refraction. S. D. Risley.
82 The Implantation of a Ball of Solid Paraffin to Secure a Prominent Stump After Enucleation of the Eye. Francis W. Alter.
83 A Clinical Note on the Treatment of Panophthalmitis by the Method of Van Milligen. William Zentmayer.
84 Improved Tendon Tucker. Frank C. Todd.
85 Hemorrhage from the Eye After Cataract Extraction. Swan W. Burnett.

81. **Changes in Refraction.**—Risley remarks that he originally believed that static refraction of the eye was a fixed of immutable quantity, and he was inclined to consider differences which he found from those of other observers due to an error of observation. He reports four cases, however, where a marked change in refraction occurred under his own observation, and remarks that we should have more charity with the early work of others and ourselves in such cases. While he still believes that in the vast majority of cases no change occurs, there are numerous exceptions to the rule.

Toledo Medical and Surgical Reporter.

April.

86 *Cardiac Complications in Rheumatism, with Report of Cases. Helen M. Nolen.
87 *Gastric Muscle Fatigue and Dilatation. Fenton B. Turck.
88 *The Regulation of Barber Shops. W. E. Hartman.
89 Fundus Lesions and Their Relation to General Diseases. (Concluded.) George F. Suker.

86. **Rheumatism.**—Nolen insists that the heart is involved in the vast majority of cases of rheumatism, chiefly by endocarditis; pericarditis is next in frequency, and, in this case, more often in the male. The younger the patient and the more severe the attack, the greater the liability to heart complications. She insists on the importance of early recognition of cardiac involvement by daily systematic and thorough examinations, and, if it is detected, treatment by absolute rest.

87. **Gastric Myasthenia.**—Turck describes this condition, chiefly due to frequent overloading of the stomach. We should differentiate between gastric fatigue caused by excessive work, that caused by some toxin and that due to obstruction of the pylorus. He describes his method of treatment by gastric dilatation and disinfection with superheated air charged with oil of cloves, etc. He advocates this pneumatic gymnastics of the stomach, which he thinks has a powerful effect on the circulation not only of the sphlanchnic system, but also on the general circulation. It has been found, he says, in the less severe cases, that a few of these treatments combined with careful diet and the measures that would naturally be enforced will cause the stomach to empty itself normally, and such treatment, carried on over a somewhat protracted time, will result in a permanent cure. For the diet he would first use raw eggs and coagulated milk; later chopped meats and bran are added to the diet. A period of rest should be allowed between the times of feeding At the outset in many cases but one meal a day is allowed, followed by two meals daily for a long time.

88. **Barber-Shop Regulation.**—Hartman pleads for sanitation and disinfection of barber shops, care as to cleanliness, disinfection of tools, etc.

American Practitioner and News, Louisville, Ky.

January 15.

90 Carcinoma in Women: Some Clinical and Pathologic Aspects. John R. Wathen.
91 Myelopathic Albumosuria. T. R. Bradshaw.
92 Two Cases of "Relapsing" Gastric Ulcer. J. Hill Abram and W. Thelwall Thomas.

Northwestern Lancet, Minneapolis, Minn.

April 1.

93 Some Remarks to the General Practitioner as to the Treatment of Acute Inflammation of the Ear and Mastoid, Following the Grip. H. McI. Morton.
94 Colorado Springs as a Health Resort for Consumption, Asthma and Hay Fever. Harlan Trask.

Journal of Advanced Therapeutics, New York.

April.

95 Phototherapy—A Ten Years' Retrospect. Margaret A. Cleaves.
96 The Development of the Radiograph. George C. Johnson.
97 The Relationship of Psychic Suggestion to Electro-Therapeutics. Maurice F. Pilgrim.
98 Roentgen Ray Therapy and Technic. Albert Soiland.

Annals of Gynecology and Pediatry, Boston.

April.

99 The Surgical Treatment of Gallstones. Stephen H. Weeks.
100 Report of a Case of Fracture of the Humerus in a Newborn Baby Occurring During Labor, with Remarks on Fractures in the Newborn. Louis Fischer.

Transactions of the Chicago Pathological Society.

February 9.

101 Preliminary Report on the Action of Neurotoxic Serum. H. T. Ricketts and T. Rothstein.
102 The Condition of the Pelvic Lymphatics in Carcinoma of the Uterus. Emil Ries.
103 Bacteriologic Studies of the Skin and Throat in Cases of Scarlatina. George H. Weaver.

March 9.

104 A Case of Gigantism and Leontiasis Ossea. Peter Bassoe.
105 Experimental Cirrhosis of the Liver in Chronic Albumose Intoxication. H. Gideon Wells.

The Post-Graduate, New York.

April.

106 On the Diagnosis of Heart Diseases. Thomas E. Satterthwaite.
107 A Clinical Consideration of Sterility in Women. James N. West.
108 Conjunctivitis as the Result of Fast Riding in Automobiles. A. Edward Davis.
109 Clinical Lectures. (Tumors, Suppurating Glands, etc.) Seneca D. Powell.

New Yorker Medicinische Monatschrift.

February.

110 Das Carcinom, Seine Frühzeitige Diagnose und Operative Entfernung. Leonard Weber.
111 Aerztliche Ethik. E. A. Fischkin.

Medical Standard, Chicago.

April.

112 A Case of Hematemesis. Arthur R. Edwards.
113 The Treatment of Carbuncle. B. Brindley Eads.
114 Practical Dietetics. A. L. Benedict.
115 General Massage with the Inunction of Cod Liver Oil. E. J. Kempf.
116 Speech Defects and Method of Treatment. James M. Brown.
117 Pain and Its Indications. E. C. Hill.

Medical Times, New York.

April.

118 Generation and the Law of Sex. (Part 2.) William More Decker.
119 Tuberculosis and Heart Disease—Two Great Factors of Today. Thomas R. Robinson.
120 The Study of Food and Its Adulterations. A. M. Leonard.
121 A Study of Influenza. J. R. Nichols.
122 Eruptive Fevers. T. J. Forhan.
123 Clinical Notes on Certain Diseases of the Skin. William Gordon.

Merck's Archives, New York.

April.

124 Neurasthenia in the Male. (Continued.) H. Edwin Lewis.
125 Pathology and Treatment of Gout. H. Strauss.
126 An Index of Diseases Alphabetically Arranged, with Their Modern Treatment. (Continued.) G. Bjorkman.
127 Ichthalbin and Its Therapeutic Applications. Julian Marcuse.

St. Louis Courier of Medicine.

April.

128 Treatment of Fibromyomata Uteri by Electricity. F. C. Ameiss.
129 Two Cases of Tetanus. Harry M. Loewenstein.
130 Vesicovaginal Fistula. Francis Reder.
131 Submucous Fibromyoma Deeply Seated in the Anterior Uterine Wall Expelled by Uterine Contractions. Henry Schwarz.
132 Hypertrophic Lingual Tonsil in a Child. Frank G. Nifong.
133 Two Cases of Sexual Contrariety. William S. Barker.
134 Preventive Medicine. (Continued.) B. F. Hart.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Bulletin de l'Acad. de Medecine, Paris.

1 (No. 10, March 10.) *Instrument for Locating Bullets in the Skull. Rémy and Peugniez.—Extirpation des projectiles logés dans l'encéphale.
2 Report of Delegate to International Congress of Gynecology, Rome, Sept. 15, 1902. A. Pinard.
3 *De l'adénopathie axillaire au début de la tuberculose du poumon. C. Fernet.
4 *Resolutions Voted by Académie in Regard to Absinthe, Liqueurs and Dram Shops in General.

5 (No. 11.) **Medical Notes from Exploring Party in Central Africa.** E. Brumpt.
6 *Relation d'une série d'experiences faites en vue de la recherche d'un sérum antituberculeux. Viguier de Maillane.
7 *Steam of Hydrogen Dioxid for Inhalations. Magnet and Planté.—Vapeurs d'eau oxygenée, etc.
8 *La tuberculose dans l'étiologie des maladies mentales et nerveuses. Anglade and Chocraux.
9 Infant Hygiene.—Sur l'alimentation des enfants des nourrices et des enfants protégés.

1. **Apparatus for Locating Bullets in Skull.**—The main advantages of the simple apparatus presented are that it dispenses with calculations and the necessity for an assistant, and that the fluoroscope is placed between it and the subject. Two long rods are mounted on a vertical standard. They are slipped back to allow the interposition of the fluoroscope, and after the vacuum tube has been adjusted to cast a shadow of the bullet on the point of each rod in turn, the fluoroscope is removed, the rods slipped forward until they touch the skull, and the bullet is located at the intersection of the prolongation of their axes. Trouvé's "alarm probe" has been modified in connection with this apparatus, so that, substituted for one of the rods, it serves as a probe, gives warning when the bullet has been reached, and also seizes it, when the foreign body can be withdrawn with the probe. The apparatus is illustrated in the original.

3. **Axillary Adenopathy in Incipient Tuberculosis of Lung.**—Fernet calls attention to the information to be derived from examination of the glands in the axilla in incipient tuberculosis. Enlarged movable glands, the size of a pea or larger, have usually coincided in his experience with a cervical adenopathy on the same side, and testified to the existence of some incipient tuberculous lesion in the corresponding lung These glandular lesions never give trouble and probably retrogress later, as he has never found them in later stages of the disease.

4. **Text of the Antiliqueur, etc., Resolutions.**—The Académie declares that all natural or artificial essences, without exception, as well as the extracted substances, incorporated with alcohol or wine, constitute dangerous and harmful beverages. They are dangerous both on account of the essences and of the alcohol they contain, and they should be prohibited, or at least a prohibitory tax imposed. The Académie calls particular attention to the danger of the "apéritifs," that is, the beverages with essences and alcohol taken on an empty stomach. The fact that they are taken before meals renders their absorption more rapid and their toxicity more active. The Académie also voted a resolution urging that effective measures be taken to diminish the number of dram shops. These resolutions were passed on the request of the government, which applied to the Académie for advice in the matter, suggesting that two lists should be drawn up, one to include the dangerous essences and the other the least injurious. The Académie decided that where all were harmful it was unwise to discriminate.

6. **Antituberculosis Serum from Fowls.**—The curative serum made by Viguier de Maillane from the serum of fowls was mentioned in THE JOURNAL of April 11, p. 999. The technic of its preparation was given, but is not published in the "Bulletin," as the communication was referred to the tuberculosis committee.

7. **Steam of Hydrogen Dioxid for Therapeutic Inhalations.**—Maget and Planté have found that enough of the oxygen is retained in the steam from boiling hydrogen dioxid to render it a valuable therapeutic agent. They have applied it in veterinary practice and also on patients with chronic tuberculous laryngitis, and the improvement noted testified to the efficacy of the measure. They found that a strength of 9 to 11 volumes gave .2 to 4 volumes in the distillate, but averaged 1 and 2.

8. **Tuberculosis in Etiology of Mental and Nervous Diseases.**—Anglade and Chocraux believe that tuberculosis occurs in an excessive proportion in the antecedents or present condition of persons affected with mental or nervous diseases. They call attention to the frequency of tuberculous parentage in mania and melancholia. A subject with general paralysis, if not syphilitic, is almost inevitably tuberculous, and frequently both combined. Epileptics, idiots, etc., often have a tuberculous taint or die tuberculous. On the other hand, Anglade's method of staining the neuroglia has shown that epilepsy and imbecility coincide with an excess of neuroglia, and that this proliferation of neuroglia constitutes the true encephalitis of general paralysis and the pseudo-encephalitis of mania and melancholia. He has also demonstrated that tuberculosis has toxins capable of inducing in an extreme degree this diffuse neurogliac reaction in both cortex and ependymis. They consider, therefore, that tuberculosis may possibly be responsible for a large number of cases of mental and nervous disease. It kills a certain part of the population and renders another part epileptic, insane, idiot or subject to some other mental or nervous affection, possibly by its action on the embryo. Raymond, in presenting their communication, stated that he does not accept their conclusions as fully established, but still advises to bear in mind the possibility of tuberculosis in the pathogenesis of mental and nervous affections in general, although he doubts whether it will ever assume as important a place as that accorded to syphilis and alcoholism in the genesis of these affections.

Semaine Medicale, Paris.

10 (XXIII, 11.) *Un projet de vaccination antituberculeuse des nourrissons (nurslings). L. Cheinisse.
11 Letter from America (Cleveland). F. Munch.—L'injection intraveineuse d'adrénaline, associée au massage du coeur et à la respiration artificielle comme moyen de traitement de la mort apparente.
12 Ibid. (Chicago.) L'asepsie opératoire aux Etats Unis.
13 (No. 12.) *Chirurgie des grosses ascites. F. Lejars.

10. **Behring's Suggestion for Vaccination of Infants Against Tuberculosis.**—Cheinisse reviews all of Behring's communications on the subject of the immunization of human beings and cattle against tuberculosis, referred to in editorial in last issue. He uses for cattle a culture of human tubercle bacilli on glycerinated serum, desiccated in a vacuum at ordinary temperature. Of this desiccated culture .004 gm. are injected into the jugular vein of a calf less than three months old, after the bacilli have been ground in a mortar and emulsified in 4 c.c. of a 1 per cent. saline solution. The amount injected is equivalent to .02 gm. of a fresh culture, but the desiccation reduces the virulence of the bacilli. A month later .01 gm. of the same culture, but fresh, is injected in the same way. The animals are then immune and placed in the midst of infected herds for months to a year have shown no traces of tuberculosis when slaughtered. As intravenous vaccination of infants is out of the question, Cheinisse hails as ripe with promise his suggestion, mentioned in our editorial, p. 1083, that possibly equally favorable results might be obtained by feeding infants on milk from immunized cows.

13. **Surgery of Large Ascites.**—Lejars advocates laparotomy in all cases of extensive ascites of doubtful origin He describes a number of instructive cases. The abdomen in one measured 94 cm. at the umbilicus, but nothing abnormal was discovered at the laparotomy except adhesions between stomach and liver, possibly the result of an old, healed ulcer. The ascites has not recurred since the adhesions were detached, and the patient has been in good health since. He urges, in particular, early intervention in case of the ascites of cirrhosis, while it is yet time to accomplish good results. After the liver has become seriously compromised little can be expected from omentopexy as a last resort. He quotes, with approval, Harris' article in THE JOURNAL of May 3, 1902. In many cases supposed to be of a tuberculous or carcinomatous nature, the laparotomy will reveal the welcome suprise of some comparatively insignificant lesion. He affirms that the well-established fact of the benefit derived from a laparotomy in tuberculous peritonitis is by no means confined to the tuberculous form. Every chronic peritonitis, whatever its nature, is susceptible of improvement from it. In one case of diffuse carcinosis with extensive ascites of the abdomen the patient was remarkably improved by a laparotomy and drainage, and survived six months in comparative comfort. The surgeon in such cases should not attempt to disturb the conditions, but merely drain with strict asepsis, and general anesthesia is not necessary. He has collected 78 cases in which Talma's operation was performed, but as it was done as a last resort, the proportion of 28 cured and 14 much improved does not represent the actual value of the intervention. He has done it three times himself.

Archiv f. Verdauungskrankheiten, Berlin.

14 (IX, 1.) *Ueber Fistula gastrocolica carcinomatosa. P. Koch.
15 Fall von Magen- (stomach) Carcinom mit erfolgreich (successfully) operierter Fistula gastrocolica, und zwei später spontan entstandenen (2 spontaneously occurring) Gastroenterostomien nach Hacker'schem Typus. G. Kelling.
16 *Ueber eine neue Anwendungsform (form of application) des Gelatose-Silber-Nitrats (Albargin-Höchst). Zur Behandlung der Dickdarmerkrankungen (affections of large intestine). W. N. Clemm.

14. **Gastrocolic Carcinomatous Fistula.**—Koch has had occasion to observe two cases of this condition in Erb's service at Heidelberg, and has collected 68 others. He tabulates the details of the 70 cases. The interval between the first symptoms of the fistula and death ranged from six days to two and a half years. Not all were cancerous; in 20 per cent. an ordinary ulcus was the cause, tuberculosis in a few, and in one the fistula was congenital. The gastrocolic fistula may develop without any symptoms, as in Aron's case, in which edema of face and legs, an effusion in the abdominal cavity and pleura and the waxy complexion were the only clinical manifestations except weakness and loss of appetite. There had never been pains in the stomach, vomiting or fever, and yet the autopsy revealed a carcinoma with a broad fistula into the colon. Fecal vomiting is the most constant symptom, but it might be prevented by complete stenosis of the pylorus or by an unusually large fistula, both of which favor the occurrence of diarrhea with undigested food, lientery, which is the second most characteristic symptom. The third is the identity between the vomit and the diarrheic stools. Accessory symptoms are the rapid emaciation, excessive thirst, fecal odor of mouth and eructations. Another symptom is the abrupt cessation of long continued vomiting of food. If gastric juice can be detected in the stools the diagnosis is confirmed, as also flatus per rectum after inflating the stomach. Sometimes a metallic ringing and gurgling sound can be heard. A stained fluid injected under pressure into the rectum may be voided by the mouth, or fluid introduced by lavage of the stomach may be siphoned out through the rectum. Treatment can be only symptomatic, morphin and opium. Some have tried an artificial anus in the ascending colon or recommended partial resection of stomach and colon, but without results. One patient was conscious of the formation of the fistula, feeling as if something had burst.

16. **Improved Silver Nitrate Treatment of Colitis Membranacea.**—Clemm imagined that the non-irritating properties of the combination of gelatose and silver nitrate, called albargin, which have proved so useful in urology, might be equally effective in intestinal affections. Time has confirmed the correctness of this view. He substitutes it for the oil cure recommended by Fleiner and Kussmaul, and uses it for the same indications. He dissolves two albargin tablets of .2 gm. each in a little hot water and then stirs it into .25 liter of tepid water. This is injected into the rectum at night, to be retained, the buttocks raised or the subject lying on his left side, then turning on his abdomen and then on his right side. The first of these albargin injections may bring an enormous quantity of the membrane-like strips of mucus, but after this the membranes disappear from the stools with remarkable rapidity. The albargin reaches the diseased mucous membrane without irritating it in the slightest, thanks to its gelatose element, and then penetrates into the intercellular spaces, where the silver nitrate is liberated from the gelatose and acts directly on the inflamed goblet cells. If the nitrate alone were used, it would coagulate the albumin on the surface and induce irritation without the ability to penetrate into the depths. He describes 10 cases thus treated; in one instance, at least, the colitis membranacea had alternated with liver colic. All of the inconveniences of the oil treatment are avoided by these albargin injections, and they frequently succeed where the oil fails.

Mitteilungen a. d. Grenzgebieten, Jena.

17 (II, 1.) *Ueber Erkrankungen des roten Knochenmarks besonders der Wirbel, bei abdom. Typhus (marrow lesions in typhoid). E. Fraenkel (Hamburg).
18 *Ueber Dauererfolge (remote results) der internen Therapie des Ulcus ventriculi. J. Schulz.
19 *Herd- (focus) Symptomen bei Hydrocephalus acutus internus der Erwachsenen (in adults). J. A. Grober.
20 *Ueber Volvulus des Coecum und Colon ascendens. O. Wandel (Kiel).
21 Die Verbreitung (distribution) der Echinokokken-Krankheit in Elsass-Lothringen. A. Goellner.
22 *Die Behandlung der akuten Perforationsperitonitis im Typhus mittels Laparotomie und Ileostomie. T. Escher (Trieste).
23 *Ueber Fremdkörper in den Luftwegen. L. Kredel.
24 *Ueber die pyogene Wirkung (action) des Pneumococcus. E. Meyer.
25 Zur Kenntniss vasomotorischer Störungen (troubles). C. Fürstner.

17. **Marrow Lesions in Typhoid.**—Fraenkel has discovered what he believes to be a constant accompaniment of typhoid infection, that is, multiple foci of necrosis with deposits of fibrin, scattered through the red bone marrow, with a special predilection for the vertebræ and ribs. These foci occur from the first week of the disease late into convalescence. They may spontaneously retrogress or may continue to progress and entail clinical manifestations. They explain Quincke's spondylitis typhosa, but are more correctly entitled typhoid osteomyelitis. Fraenkel found these lesions constantly in 13 typhoid cadavers, including one subject who had died from an intercurrent pneumonia. Of the number 6 were men from 17 to 43 years of age; 5 were women from 19 to 52, and 2 were children from 1 to 10. Death had occurred in the first week in 3; in the second in 4; in the third in 4; in the sixth in 1, and during a relapse in 1. They were never found in his examination of cases of diphtheria, scarlet fever, erysipelas, phlegmons, pneumonia nor peritonitis, but Chiari has observed a similar phenomenon in variola. He studied it on 22 cadavers, and published an account of it under the title osteomyelitis variolosa. His description differs from Fraenkel's, however, in the fact that he noticed occasionally evidences of inflammation and did not find traces of fibrin. The typhoid foci are distinguished by the complete absence of any tendency to inflammation or suppuration and the constant fibrin deposits best brought out with the Weigert fibrin stain. Typhoid bacilli were found constantly in the marrow in the 10 cases examined, with the other bacillus in cases of mixed infection.

18. **Remote Results of Internal Treatment of Gastric Ulcer.**—Schulz reviews the results in 184 cases treated at Kast's clinic at Breslau and 107 at Hamburg. Of this total of 291 cases, 165 were dismissed as cured and 95 much improved, 15 as unimproved, and 16 died. Treatment was by the Ziemssen-Leube method. It failed, therefore, in 11 per cent., while the mortality was 5.5 per cent. He has been able to obtain information of the late results in 157 cases from six months to twenty-four years after the course of internal treatment. Only 64 per cent. have been permanently cured. The number of the uncured has increased threefold, while the number of improved has diminished by 25 to 33 per cent., and the cures are not so complete as assumed at first. The immediate results are no criterion of what may be anticipated later, and the cases that are merely improved are liable to grow worse again. On the other hand, these statistics show that, in spite of only moderate success at first and in spite of recurrence, a cure may still be effected by internal treatment, and even without this in time. The patient should not be dismissed from treatment until a complete cure has been realized. If improvement is not speedily obtained the possibility of complications should be borne in mind, and other measures should be considered. He gives in his statistics the condition at dismissal and when examined later of the different cases for better comparison.

19. **Focal Symptoms of Acute Hydrocephalus in Adults.**—Grober's patient was a woman, aged 24, whose husband was syphilitic. The affection developed and ran its course to a fatal termination in ten weeks. Potassium iodid was administered, but without benefit. The autopsy disclosed hydrops of the ventricles, but no meningitis nor tumor, as anticipated, merely an ependymitis granulosa. Among the symptoms observed were spasms in the right face, loss of sensibility in the right supraorbital region, paresis of the left facialis and hypoglossus, knee-jerk on right side exaggerated, choked disc and vomiting. He has found only two similar cases on record, all fatal. Lumbar puncture was done once, but alarming symptoms compelled its discontinuance, although the patient seemed easier afterward. In future he should institute vigorous specific antisyphilitic treatment and at least try the efficacy of repeated small lumbar punctures.

20. **Volvulus of Cecum and Ascending Colon.**—Wandel has noticed in examining 640 cadavers that in 10 per cent. the lower part of the cecum and ascending colon was freely movable from lack of the normal fixation. This exposes the individual to the danger of displacement of this part of the bowel and he has observed in the clinic 5 cases in which this occurred. The cadavers were those of 13 male and 15 female children, 22 men and 16 women. In his clinical cases the kinking or spiral twisting on the longitudinal axis or twisting on the mesentery occurred suddenly, usually from some muscular effort in which the trunk was stretched over backward, as in trying to hit a high ball in tennis. In some cases these attacks of recurring volvulus at long intervals dated from infancy, and there was generally a history of the failure of purgatives to relieve. Frequently the colic is merely aggravated by them. During the colic the subjects usually find that standing very erect or bending forward will relieve the pain.

22. **Treatment of Typhoid Perforation with Ileostomy.**—Escher is so fortunate as to be able to report 3 patients cured out of 4 on whom he operated on account of peritonitis from perforation of the bowel in the course of typhoid fever. Three were very severe cases. The patients were from 8 to 19 years of age and the intervention was required at the end of the third or beginning of the fourth week. From twenty-two to eighty hours had elapsed after the first signs of perforation except in the case of a child of 8 in whom the acute symptoms had been noted for ten hours after a suspicious stage lasting seventy-two. In reviewing the literature he has found 22 cases reported as under 18 years and only about a quarter recovered after the operation, but some required a second intervention; 1 died in a relapse and 1 passed through a serious metastatic pyemia. These results demonstrate that children are no better subjects for operation in such cases than adults. He attributes his 75 per cent. of complete recoveries to his technic. He does not attempt to suture the perforation, but merely draws the perforated intestine to the wound and sutures the loop to the skin. This saves time and rests the inflamed gut below, but its chief benefit is that it wards off the dangers of the obstruction of the bowels, which is sure otherwise to follow the perforation from partial paralysis of the bowel or other cause. There is no meteorism when this is done, no stagnation of feces, and convalescence proceeds rapidly. On the other hand, the time required to suture the perforation is a great strain on the patient, while it acts directly contrary to Nature, which seeks to relieve the paralytic ileus by opening an outlet by way of the perforation. The artificial anus created by the ileostomy should be made in the perforation and in such a way as not to interfere with the draining tamponing of the peritoneum. In case the opening afforded by the perforation alone is not sufficient, ileostomy at any other point may be done. This fastening the perforated loop to the skin, supplemented by draining tamponade of the peritoneum, is the most certain means of prevention of further spread of the peritonitis. (See editorial in last issue.)

23. **Foreign Body in Air Passages.**—Kredel warns to have everything in readiness for tracheotomy before attempting instrumental extraction. He reports 5 cases. In 3 a bean and in 2 a nail had entered the air passages. In one case the child might have been saved by proper intervention, but the symptoms were ascribed to another casual cause. In one a swollen bean in the trachea acted like a valve, causing dyspnea during expiration, along with paralysis of the lungs. In another the nail stuck between the hyoid bone and epiglottis, holding down the latter.

24. **Pyogenic Action of Pneumococcus.**—Meyer has observed 24 cases of this nature. The pneumococcus has an especially pyogenic tendency in children, with a predilection for the serous membranes, but he has observed strumitis, abscesses in mouth and bones, periostitis, arthritis, peritonitis and general sepsis from its action.

Archives de Neurologie, Paris.

26 (XXV, January.) •Etat du fond de l'oeil (condition of fundus of eye)chez les paralytiques généraux et ses lésions anatomiques initiales et terminales. Keraval and Raviart.

27 Note sur l'évolution des obsessions et leur passage au délire. J. Séglas.

28 La rééducation motrice dans les maladies du système nerveux. Ses applications à l'ataxie des tabétiques. G. Constensoux.

29 (February.) •Contribution à l'étude des folies (insanity) par contagion. G. Carrier.

30 Des obsessions et impulsions. Syndromes épisodiques chez les dégénérés. Soutzo fils.

31 (March.) •Nouvelle contribution à l'étude des psychoses post-opératoires. L. Picqué and M. Briand.

32 Sur quelques particularités de la névralgie faciale et son traitement par l'electricité. A. Zimmern.

26. **The Fundus of the Eye in Paresis.**—In an examination of 51 paretics Keraval and Raviart find that the majority were males with notable lesions of the fundus, and in only those that were in remission were they lacking. In 7 advanced cases there were 5 of white papillary atrophy, one of gray atrophy and one of posterior sclerochoroiditis of both sides without myopia. A pale disc was observed in 13 paretics. In 22 others one segment of the papilla, external, internal, lower or upper, presented a soft (flou) appearance, vaguely margined. This is the preliminary stage of papillary atrophy. No cases were found in women of these slow and long-continued types of ophthalmic lesions. An ophthalmic examination was confirmed in autopsies by microscopy, and even in the mild cases there was a papillary neuroretinitis presenting the same characters of diffuse meningoencephalitis; infiltration of the noble elements of the papilla and ophthalmic nerve by connective tissue cells, thickening of the connective tissue framework of the nerve, diffuse atrophy of the ganglion cells and nerve fibers of the retina and in the more advanced cases destruction of the nerve cells of the retina and production of papillary sclerosis.

29. **Contagion of Insanity.**—The name "folie à deux" should be supplanted by the more general designation of insanity by contagion and morbid suggestion. This last designation is based on the pathogeny of the disorder and has the advantage of comprehending in the same term cases of psychic phenomena which start from morbid suggestion and all the insanities of crowds. It is necessary to separate the codeliriants in all cases of contagious insanity. It is also necessary to consider from a medicolegal point of view the subjects of the passive imposed insanities as being in the suggestive state and consequently irresponsible so far as they are in that condition.

31. **Post-Operative Psychoses.**—Under the title of post-operative psychoses Picqué and Briand include practically only the disorders of the ideational sphere. Post-operative neurasthenia should be distinctly separated from them. In the group thus limited we may separate the toxic forms and consider them apart. If they are allied in a nosologic point of view, this is not the same in practice, and uniting of the two forms obscures the questions of prophylaxis, symptomatology, prognosis and treatment. The infectious insanities are the transitory forms which may recover spontaneously in hospitals or under surgical treatment. To send them to an asylum, as is often done, is to sequestrate them unnecessarily and take them away from their needed surgical aid. The true post-operative group on the other hand is permanent and can be treated only in the asylum. The pathogenicity of these insanities varies in the two groups. In the first the insanity is exclusively infectious and may be cured by suppression of the focus. There is no history of acquired predisposition of the nerve centers, but in the second this predisposition constitutes the principal active cause. It is more particularly a hereditary degenerative weakness. The authors insist on the importance of this separation and report a number of interesting illustrative cases.

Revue Neurologique, Paris.

33 (XI, 1.) Névrite radiculaire subaigue, dégénérescences consécutives dans la moelle (in spinal cord), racines postérieures—et dans les nerfs periphériques—racines antérieures. J. Nageotte.

34 Remarques sur la pathologie des acroparesthésies. A. Pick.

35 •Quelques nouvelles données sur la physiologie des reflexes tendineux. A. E. Stcherbak (Warsaw).

36 Du parasite trouvé dans le sang (found in blood) des epileptiques. Son agglutination par le sérum des animaux infectés et par le sérum des epileptiques. Bra.

37 (No. 2.) Les lésions du système lymphatique postérieur de la moelle sont (of spinal cord are) l'origine du processus anatomo-pathologique du tabes. P. Marie and G. Guillain.

38 *Cas de contracture post-hémiplegique. Apparition moins de 24 heures après (appearance in 24 hours after) le début de l'hemiplégie d'une "contracture hative" en flexion forcée et persistante du membre inférieur coexistant avec la paralysie flasque du membre superieur. Devic and Gallavardin.
39 *Pression intraartérielle dans la névrose traumatique. L. Haskovec.
40 (No. 3.) *Atrophie du cervelet (cerebellum) et sclérose en plaques (in patches). A. Thomas.
41 Nouvelles recherches cliniques sur les variations pathologiques de la courbe de secousse musculaire (curve of muscle-jerk). M. Mendelssohn.
42 (No. 4.) Compression medullaire (of spinal cord) par fracture du rachis. Paraplégie spasmodique. Laminectomie. Guérison (recovery). F. Raymond and Sicard.
43 Dégénérescences descendantes consécutives à un ramollissement (softening) du pedoncle cérébral. R. Cestan.
44 *Examen cytologique du liquide cephalo-rachidien dans le tabes. Armand Delille and J. Camus.
45 Mydriase unilaterale et corps étranger (foreign body, barley beard—epillets d'hordeum murinum) du conduit auditif externe (in outer auditory canal). J. Sabrazès.

35. New Data in Physiology of Tendon Reflexes.—Stcherbak has found that vibrations such as those produced by a tuning fork, are a specific stimulus to the deep nerve terminals involved in the production of the knee-jerk. A large tuning fork was screwed firm on a stout metal standard and set in motion by an electro-magnet, about 33 vibrations to the second. He applied to the standard the knee or other part of the animal to be tested, and thus made thirty-five tests on 16 rabbits. When the knee was applied, the knee-jerk was much exaggerated by the procedure. The vibrations were able to artificially "charge" the reflex apparatus with nerve energy, and percussion and passive movements were able to "uncharge" it afterward. Percussion and passive movements of the knee after the vibrations induced clonus of the knee or spasmodic trembling. These phenomena could likewise be induced by similar irritation of the other leg, exaggerating the crossed reflex. After an hour of the primary vibrations the spasmodic phenomena could be elicited as late as twenty-four days afterward by passive movements of the leg. The more intense the stimulus and the shorter the interval, the fewer passive movements were required. If the spinal cord was severed above the route of the patellar reflex, local application of the vibrations induced a durable, unilateral exaggeration of the knee-jerk, but no clonus nor tremor. Passive movements repeated even 4,300 times on one control animal never induced the clonus and tremor, while a few dozen or hundred passive movements appied to the "vibrated" animals never failed to bring the clonus even several days after the stimulus. When the vibrations were applied to the spine, spasmodic action followed affecting all the muscles in both hind legs. In short, this method of applied vibrations is able to induce in the inferior (somatic) nerve apparatus the phenomena which we are accustomed to attribute exclusively to the brain. The vibrations once applied leave traces which may remain latent for a long time, as in the psychic organ an idea or a sensation may leave a latent trace which persists through a long period and may be revived by some stimulus from the apparatus of psychic association.

38. Post-Hemiplegic Contracture.—The contracture appeared in less than twenty-four hours after the hemiplegia. The arm exhibited lax paralysis while the leg was flexed rigidly on the thigh. The autopsy showed the causal lesion to be a circumscribed softening of the internal capsule with degeneration of the pyramidal tract.

39. Blood Pressure in Traumatic Neuroses.—Haskovec found that the arterial pressure in seventeen subjects examined was not augmented but occasionally diminished. No regularity was apparent.

40. Atrophy of Cerebellum and Sclerosis in Patches.—Thomas adds a third to the two cases he has previously reported of what he calls "olivo-ponto-cerebellar atrophy." The clinical picture is that of the cerebellar syndrome. It has no hereditary or family features and affects elderly persons. In the case described, besides the lesions suggested by the name of the affection, he found others resembling those of sclerosis in patches, and he believes that the two affections coincided. Study of these three cases indicates that the labyrinth, the cerebellum and the cerebral cortex all participate in the maintenance of the equilibrium, and consequently lesions disseminated through these three organs entail disturbances in the equilibrium more pronounced than when the cerebellum alone is affected.

44. Cytology of Tabes.—In 13 cases of tabes examined, of four to forty-two years' duration, no regularity could be found in the cytology of the cerebrospinal fluid It is evident that this means of investigation has no value for either prognosis or diagnosis in such cases.

Centralblatt f. Nervenheilkunde und Psychiatrie, Berlin.

46 (Year XXVI, No. 156.) Ueber die Grenzen (limits) psychiatrischer Erkenntniss. R. Gaupp.
47 *Ueber ein eigenartiges, operativ beseitigtes katatonisches Zustandsbild. K. Bonhoeffer (Breslau).
48 Ophthalmoplegia interna traumatica. E. Schultze. One case.
49 (No. 157.) Zur Psychophysiologie des Negativismus. R. Vogt.
50 Beitrag zur path. Anatomie des Central-Nerven-Systems und des Rückenmarks. Nissl.

47. Psychosis with Catatonia Cured by Operation.—A man of 57 presented an intermittent psychosis with symptoms of paresis and others, resembling those of catatonia, and preceded by a long stage of alteration of character. He had a history of a severe traumatism of the head thirty years before, and the cicatrix was somewhat depressed. This region was explored after cutting an osteoplastic flap of about 50 sq. cm. The dura was not adherent, and after incising it the pia was seen to be much congested and the brain bulged out over the edges of the incision. There were no signs of a focal lesion. The pia was raised where the hyperemia was most pronounced and some of the vessels were crushed in doing this. The region corresponded to the posterior third of the second convolution. The dura was sutured and the flap lightly replaced, but not pushed down quite into its old place. This left a little more space for the brain beneath. During the twenty-one months that have elapsed since, there has been no recurrence of the psychosis or other previous symptoms but the patient has had an occasional attack of epilepsy. He has been able to resume his long abandoned occupation and the rare epileptic attacks are not regarded by his family and friends as detracting much from the success of the intervention.

Deutsche Zeitft. f. Nervenheilkunde, Leipsic.

51 (XXIII, 1-2.) Motor Disturbances with almost complete Anesthesia of One Arm After Stab Wound of Spinal Cord. A. Strümpell.—Ueber die Störungen der Bewegung bei fast vollständigen Anästhesie eines Armes durch Stichverletzung des Rückenmarkes, nebst Bemerkungen zur Lehre von der Coordination und Ataxie.
52 *Ueber Epilepsie. M. Biro.
53 Das Verhalten einiger Reflexe bei Gesunden und bei Tabes. J. Kollarits.
54 *Bemerkungen zur Früh- (early) Diagnose der Tabes. Ibid.
55 Beitrag zur Kenntniss der Myasthenie gravis mit Befund von Zellherden (cell foci) in zahlreichen Muskeln. R. Link.
56 Zur Frage der Innervation des Musculus cucullaris. Schulz.
57 Zur Kenntniss der Lähmungen (paralyses) bei der Meningitis cerebrospin. epidemica. J. Schmid.
58 Ueber Chorea mollis sive paralytica mit Muskelveränderungen (muscular changes). W. Rindfleisch.
59 *Klinische und statistische Daten zur Symptomatologie der Tabes. Die Tabes unter den Arbeitern (in laboring classes). A. von Sarbo.
60 Exp. Untersuchungen über das Verhalten der Patellar-Reflexe bei hohen Querschnitt- (transverse section) Myelitiden. R. Balint.

52. Epilepsy.—In Biro's experience at Warsaw with 306 cases of epilepsy he made a special study of the premonitory symptoms of the seizures and the relations between them and to the intensity of the attack. Also the relations between the bladder symptoms and biting of the tongue to other symptoms observed, as well as other details which are set forth in this article of fifty pages in length. Only 14 per cent. were weak minded. The seizures displayed a regularly ascending type in 61 per cent.; an intermittent type in 26 per cent., and a descending type in 13 per cent. In 6 cases he noticed certain post-epileptic symptoms which have previously been regarded as premonitory phenomena. In 1 per cent. the epilepsy was reflex, from adenoid vegetations, and from masturbation in the same proportion. Syphilis was certain in only 1 of the 26 patients over 30, and hereditary lues in none. Alcoholic parents were noted in 14 per cent., and 8 per cent. of all were addicted to the abuse of alcohol. Aura were noticed in 28 per cent. They usually preceded the milder seizures.

54. **Early Diagnosis of Tabes.**—Kollarits tabulates details of 100 cases of tabes studied in regard to their early symptoms. The hypotony frequently confirmed the diagnosis, also the paralysis of the ocular muscles. In one case paralysis of accommodation was the first symptom and the ocular muscles were not affected until later, when a syndrome developed suggesting Basedow's disease, exophthalmus, struma, nervous disturbances and insomnia. As time elapsed, however, the tabes became unmistakable. The patient was a woman of 24 who had acquired syphilis four years previously. In another instance the paralysis of accommodation and lack of pupil reflex, the trigeminal anesthesia and Menière's vertigo were accompanied by the Basedow triad, but the diagnosis of tabes was sustained by the speedy development of lancinating pains and absence of ankle-clonus. In another case the tabes developed at the early age of 21 soon after syphilitic infection, the early symptoms being headache at night, loss of hair and abortion at the seventh month of a macerated fetus, followed four days later by abducens paralysis and in two months with lancinating pains and gradual abolition of reflexes.

59. **Symptomatology of Tabes.**—Sarbo has had 7.4 per cent. cases of tabes in 1,200 patients with various nervous affections in his private practice and 2.6 per cent. in 4,000 in hospital and dispensary patients. The proportion of men to women was 83 to 6 in the first class and 87 to 17 in the second. The age ranged from 23 to 73. The longest interval after syphilitic infection before the tabes developed was twenty-seven years and in 10 cases it was only one to five years. In 7 instances both man and wife exhibited tabes. The primary symptom in 67.5 per cent. of 195 cases was lancinating pains, while diplopia was noticed as the first symptom in 3.6 per cent., and gastric symptoms, vertigo or paresthesia were the first in 3.1 per cent. each. Weakness of the feet was the first symptom in 2.7 per cent., and bladder symptoms, gastric crises or impaired vision were each the first in 2.2 per cent. In 1.6 per cent. the girdle sensation first attracted attention; in 1.1 per cent the heart crises or painful lassitude. In .5 per cent. the first symptom noted was dyspnea, deafness, ptosis or the Argyll sign. In the total of 195 cases lancinating pains occurred at some stage of the affection in 93 per cent.; the Romberg in the same proportion and the ankle-clonus was abolished in 91 per cent. Westphal's sign occurred in 89.4 and the Argyll in 88.8 per cent.; analgesia of the peroneus region in 85.5 per cent.; bladder symptoms in 79 per cent.; paresthesia in 72; analgesia in ulnar region in 66 and atrophy or blanching of the optic nerve in 61 per cent.; anisocoria in 46 6 per cent.; bilateral myosis in 21 and mydriasis in 14 per cent.; crises in 13.7 per cent.; paralysis of ocular muscles in 10.5 per cent, and trophic disturbances in 4.5 per cent.

Neurologisches Centralblatt, Berlin.

61 (XXII, 1.) Zur Pathologie des Bekanntheitsgefühl—Bekanntheitsqualität (certainty in remembering). A. Pick.
62 Ueber eine Entwickelungshemmung der Nase (ein bisher nicht beachtetes Degenerations-Zeichen). H. Gudden. Imperfect closure of tip of nostril as sign of degeneracy.
63 (No. 2.) Ueber die Störung des Flankenganges (gait) bei Hemiplegikern. A. Schüller.
64 Ueber die Wirkung (action) des Hedonals auf den thierischen (animal) Organismus. P. S. Lampsakow.
65 Zur Frage von der autogenen Nerven-Regeneration. A. Bethe.
66 Ibid. E. Münzer.
67 Ueber hysterische Dämmerzustände ("twilight conditions") und das Symptom des "Vorbeiredens" (irrelevant answers). A. Westphal. (Commenced in No. 1.)
68 (No. 4.) Der Ursprung (origin) des Tractus isthmo-striatus oder bulbo-striatus der Taube (in the pigeon). A. Wallenberg.
69 Eine merkwürdige Complication eines ophthalmischen Migräne-Anfalles. L. Hoefmayer. Woman of 57, unconscious for ten days.
70 Ein Ohr- (ear) Reflex. W. Alter.
71 (No. 4.) *Zur Casuistik des Verhaltens der Haare bei Geistes-Kranken (behavior of hair in mental affections). W. Heinecke.
72 Biologie und Leistung der centralen Nervenzelle. P. Kronthal.
73 Beitrag zur Lehre der Encephalomyelitis disseminata. E. Beuch. (Commenced in No. 3.)
74 (No. 5.) Ueber den Acromal-Reflex. W. v. Bechterew.
75 Ueber den Carpo-Metacarpal-Reflex. Ibid.
76 Neue Beiträge zur Physiologie der Sehnen-Reflexe. A. E. Stcherbak.
77 Ueber Incontinentia vesicæ und Lähmungserscheinungen (paralytic phenomena) an den Extremitäten bei Erweichungsherden(in case of foci of softening) in den subcorticalen Ganglien. A. Homburger.
78 Weitere Mittellungen über die entwickelungsgeschichtlichen (myelogetischen) Felder (fields) in der menschlichen Grosshirnrinde (in human cortex). P. Flechsig. Embryological study.

71. **The Hair in Mental Affections.**—Heinicke describes a case in which a broad band of hair became silvery during the attacks of mental excitement but returned soon afterward to its normal color. The patient was a girl of 21, of a well-to-do family, a pronounced case of dementia precox with intervals of apparent health. One or two hours before a psychic attack the white band appeared and the pupils became dilated. At the culmination of the attack the hair was almost silvery. The scalp beneath was also sensitive to pressure. The microscope showed that these hairs contained an abnormal amount of air, and if the air was forced out, the hair regained its normal blonde color. He is inclined to accept the local action of some autotoxin on the brain and scalp as the cause of the phenomena observed.

76.—Same as 35 above, only in German instead of French.

Sammlung zwangl. Abh. Nerven- u. Geisteskrankheiten, Strassburg.

79 (IV, 1.) *Ueber schwachsinnige Schulkinder (feeble-minded school children). L. Laquer.
80 (No. 2.) Limits of Soundness of Mind. A. Hoche.—Die Grenzen der geistigen Gesundheit.
81 (No. 3.) *Sedatives for the Insane.—H. Pfister.—Die Anwendung von Beruhigungsmitteln bei Geisteskranken.

79. **Feeble-Minded Children in School.**—Laquer expatiates on the extreme importance of recognizing mental deficiency during the very first year or two of school. Appropriate treatment and guidance at this early stage may accomplish wonders while the lack of it confirms the child in its morbid bent. He gives a chart for school inspectors which, if filled out from the child's first entrance into school life and carried along, would soon reveal the lack of normal brightness and the necessity for exclusion from the ordinary school routine in favor of special training.

81. **Sedatives in Mental Affections.**—Pfister has found scopolamin the sovereign sedative, preferable to all others, for the insane. He has never noted any by-effects from the daily subcutaneous injection of 1.5 to 1 mg., even when continued for weeks. It has no cumulative action, and he has never encountered a case of idiosyncrasy. Abrupt suspension causes no disturbance. It is especially valuable for the immediate soothing of very excited patients. Among the hypnotics he considers paraldehyd supreme. He gives 3 to 5 gm. in abundance of water, giving another 3 gm. in exceptionally urgent cases. In three to thirty minutes the patient drops into sleep which lasts for four to eight hours. As much as 15 gm. has been given in some cases daily for weeks without harm.

Zeitschrift f. Psychologie und Physiologie der Sinnesorgane, Leipsic.

82 (XXXI, 1.) Ueber Muskel-Zustände (conditions). C. Ruger.
83 Zur Frage der geometrisch-optischen Täuschungen (illusions). T. Lipps.
84 (No. 2.) Untersuchungen über die optische und haptische Lokalisation bei Neigungen um eine sagittale Asche (on inclination around a sagittal axis). M. Sachs and J. Meller.
85 Untersuchungen über die so-gen. Aufmerksamkeitsschwankungen (attention variations). E. Wiersma.
86 Zur Lageschätzung bei seitlichen Kopfneigungen (orientation with head inclined sideways). H. Feilchenfeld.

Rivista di Patologia Nerv. e Ment., Florence.

87 (VII, 11.) Contributo allo studio delle degenerazioni consecutive al tagilo delle radici (section of roots) dorsali. L. Tarulli and L. Panichi.
88 Note cliniche su 2 osservazioni di astasia-abasia in soggetti epilettici. G. Sanna Salaris.
89 (No. 12.) Mirror Writing and the Autonomous Graphic Motor Center. G. Pieraccini.—La scrittura a specchio ed il centro motore grafico autonomo.

Wiener Klin. Wochenschrift, Vienna.

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90 (XVI, 6.) *Zur Früh- (early) Diagnose der Hypophysis-Tumoren. A. Fuchs.
91 Zur Kenntnis der Agglutinine und gewisser Precipitine des Blutes. A. Klein. (Commenced in No. 5.)
92 Diagnosis of Melano-Sarcoma of Choroid by Transillumination. M. Sachs.—Demonstration eines Falles von Melanosarkom der Chorioidea mit Hilfe einer neuen Durchleuchtungslampe.
93 (No. 7.) *Die Vererbung (hereditary transmission) der Syphilis. Ist eine paterne Vererbung erwiesen? R. Matzenauer.
94 *Bedeutung (importance) der Blasenscheidenfistein (vagino-vesical fistulæ) in der geburtshiflichen (obstetric) Indikations-Stellung. E. Kraus.

95 Fall von Fibrinurie bei Nephritis. R. Lostorfer.
96 *Die Blitzverletzungen (injuries from electricity) in klinischer und sozial-rechtlicher Beziehung. S. Jellinek. (Commenced in No. 6.)
97 (No. 8.) Hernia obturatoria tubæ et ovarii sinistra. F. Schopf. One case. "Fifth on record."
98 Ueber die Pellagra mit Berücksichtigung ihres Vorkommens im südlichen Theile der Bukowina. M. Würzel.
99 Bossi's Dilator. A. Blau.—Ueber die Erweiterung der Cervix durch das Bossi'sche Instrument. (Chrobak's clinic.)
100 (No. 9.) *Ueber Leberprobe (Docimasie hépatique). J. Seegen.
101 Ueber den Herpes. L. Merk.
102 *Ueber Behandlung schwerer (severe) Syphilisformen mit Iod-Quecksilber-Kakodylat. G. Löwenbach.
103 (No. 10.) Torsion of Pedicle of Spleen and Wandering Spleen. K. Büdinger.—Ueber Stieldrehung der Milz und die Aetiologie der Wandermilz.
104 *Experimental Union and Transplantation of Blood Vessels. A. Exner.—Einige Tierversuche über Vereinigung und Transplantation von Blutgefäszen.
105 *Zur Kasuistik der Halsrippen (cervical ribs). E. Ranzi.
106 Ueber Charcot-Leyden Crystalle im Empyem-Eiter (pus). H. Floderer.
107 Ueber Behandlung des Keuchhustens (pertussis) mit Aristochin, einem neuen geschmacklosen Chinin-präparat (tasteless quinin preparation).
108 Lymphosarcoma bulbi urethræ von einer gonorrhoischen Striktur ausgehend. G. Kapsammer.
109 (No. 11.) Menstruation und Corpus luteum. O. Th. Lindenthal.
110 Examination of Lungs and Heart of Vienna School Children. J. Zappert.—Ueber Lungen und Herzuntersuchungen an Wiener Schulkindern.
111 *Ein Hemdknopf (collar button removed from) aus dem Unterlappen (lower lobe) der linken Lunge auf natürlichem Weg entfernt. G. Killian.
112 Pyocyaneus- Befund bei Meningitis. F. Berka. Pure cultures. One case.
113 *Ueber Thiosinamin-Versuche bei Rhinosklerom. E. Glas.
114 (No. 12.) *Identity of Bacilli of Human and Bovine Tuberculosis and Immunization of Cattle Against Tuberculosis. E. v. Behring.—Ueber die Artgleichheit der vom Menschen und der vom Rinde stammenden Tuberkelbazillen und über Tuberkulose-Immunisierung von Rindern.
115 Dyspepsia intestinalis acida lactatorum. J. Raczynski.
116 Ueber eine eigenartige (peculiar) Form von Tuberkulose des lymphatischen Apparates. J. Steinhaus.
117 Zur Statistik der amyloiden Degeneration mit besonderer Berücksichtigung der Tuberkulose. R. Blum.
118 *Die Vererbung (hereditary transmission) der Syphilis. K. Preisich.

90. **Early Diagnosis of Tumor of the Hypophysis.**—The diagnosis in the case described was based on the bitemporal hemianopsia and the fact that the excavation in the sella turcica was much larger than normal, as seen in the radiogram taken during life. This symptom has already been noted by Oppenheim. Cyon regards the hypophysis as a regulator of nutrition as well as of the intracranial pressure. Its normal internal secretion has an inhibiting action on nutrition. This view seems to be confirmed by a case of tumor of the hypophysis described by Fröhlich in which obesity rapidly developed with trophic disturbances. In the present case also, the subject, a man of 30, showed marked obesity of rapid development.

93. **Hereditary Transmission of Syphilis.**—Matzenauer argues to prove that syphilis is like other diseases in regard to its inherited transmission, and the idea of setting it apart in a class by itself has no foundation in fact. It can not be transmitted from the father. The mother of every child with hereditary syphilis must be herself a syphilitic, even although she may not exhibit any evidences of it. Consequently, she is immune to fresh infection and can nurse the child. The theory that the children of syphilitic parents are immune should be abandoned. The consequences of Matzenauer's views are that the mother of a syphilitic child, being herself a syphilitic, requires specific treatment, and that the syphilitic parents of a healthy child may transmit the infection to the child.

94. **Vesico-Vaginal Fistulas in Obstetrics.**—Kraus describes the experience at Schauta's clinic. The conclusions are unmistakable that in case the cicatricial tissue prevents relaxation and delivery, the child must be extracted by a laparotomy after allowing due time to determine the necessity for it. Forced dilation and deep incisions in the cicatricial tissue to relieve the stenosis are dangerous, as they are liable to induce lacerations and hemorrhage and be followed later by a recurrence of the fistula. Two cases are described in detail and those in the literature reviewed.

96. **Electric Accidents.**—The "Wochenschrift," No. 46, 1902, published that part of Jellinek's article treating of symptomatology, pathology and therapy, and the present issue treats the subject from the clinical and forensic points of view. Among the important points brought out are the peculiar external injuries, the development of mental disturbances, of amnesia, the microscopic alterations discoverable in the brain of subjects killed by electric action and the special way in which the clothing of the subjects and the surrounding objects are deranged and destroyed. The injury done may not become manifest for hours and days after the accident.

100. **Docimasia Hepatica.**—In Seegen's tests entire lack of glycogen in the liver occurred only in healthy subjects who had died from carbonic oxid poisoning or protracted asphyxia. In one of the clinical cases he describes a woman who found her babe dead in her arms at night, supposed she had smothered it, but the liver contained glycogen and the findings showed that the child had died from fibrinous bronchitis.

102. **Iodin-Mercury Cacodylate in Syphilis.**—Löwenbach publishes the particulars of 40 cases of syphilis which establish the peculiar advantages of this preparation of mercury for cachectic and anemic subjects with ulcerating or gummatous lesions, even after complete failure of the ordinary mercurial or iodid treatment. It is also peculiarly effective in cases of combined syphilis and psoriasis, but in the milder forms of syphilis, in well nourished, otherwise healthy persons, it has no effect. The communication issues from Neumann's clinic.

104. **Research on Transplantation of Blood Vessels.**—In Exner's experimental operations when a vein was implanted in an artery and the circulation of arterial blood through it established, the vein became thrombosed. The idea, therefore, of substituting a lost artery by some adjacent vein he believes to be impracticable. The attempts to transplant veins and arteries also failed for the same reason. He attributes the thrombosis to the consequences of defective nourishment of the transplanted fragment owing to the anatomy of the vasa vasorum. The vessels nourishing the transplanted fragment are cut off from communication with their feeder. The consequence is thrombosis, as the blood stream inside is evidently not sufficient alone for the nourishment of the transplanted piece.

105. **Cervical Ribs.**—The discovery of cervical ribs at autopsies is by no means rare, but the number of those recognized as causing clinical disturbances is limited. Ranzi describes 2 such cases and reviews 29 he has found in the literature. The patients were between 17 and 50 years of age. Scoliosis is frequently observed in these patients. In his 2 cases the clinical manifestations were paresthesia, a sensation of coldness and weakness of the arm and atrophy. These symptoms had been noted for three and fifteen years before the operation. All pain and paresthesia were banished by the intervention, but the atrophy in the hand was only partially improved in one case. The other patient was completely restored.

111. **Collar Button in Lung.**—Killian discovered the foreign body in the lower lobe of the lung by direct bronchoscopy. It lay 5 cm. from the bifurcation behind the fourth rib. He inserted a Lister hook through the bronchoscope tube and it seized the button at the first attempt. It was an ordinary horn collar button.

113. **Thiosinamin with Rhinoskleroma.**—Glas found in an experience with 5 cases of rhinoscleroma and one of severe tertiary lues, that thiosinamin affects rhinoscleromatous tissue the same as cicatricial, softening and rendering it more elastic so that it is capable of dilation, previously impossible. It should be regarded as a valuable adjuvant to mechanical measures, except in cases of much swelling of the subglottic region in which it is liable to increase the tendency to suffocation.

114. **Immunization Against Tuberculosis.**—The main points in Behring's communication were presented in an editorial in our last issue, p. 1083. He further states that the bacilli of fowl tuberculosis do not differ in any essential respects from those of human and bovine tuberculosis, which he believes to be identical. The phylogenetic and pathogenic properties of cultures from two fowls, known to have been infected by feeding on the carcass of a tuberculous cow, seem to be identical

with those of bovine bacilli. In regard to the imperfect development of the intestinal walls in early infancy, he states that the mucus and the cells secreting it form a protecting rampart against the penetration of toxins or bacilli into the walls of the fully developed intestine. The case is different in newly-born children or animals. There is no mucus production at first; the cells do not develop until later and then gradually, when the secretion of mucus appears in isolated patches of functioning cells. During this phase of imperfect development substances are absorbed by the stomach and intestinal walls as readily as if introduced into the blood or under the skin. Tuberculosis infection at this stage of development may spontaneously retrogress, but in cattle, at least, Behring is of the impression that additional infection in later years is more liable to occur and to be serious in those that have been infected during this early phase of imperfect development. The danger of infection of adults from meat and butter containing tubercle bacilli is insignificant, therefore, in comparison with the danger from the ingestion of infected milk during this susceptible stage, whether the tubercle bacilli in the milk are of human or bovine origin. The readiness of absorption at this age also favors, he thinks, the suggestion that infants might be immunized by feeding them on milk from immunized animals. (See also No. 10 above.)

118. **Hereditary Transmission of Syphilis.**—Preisich claims syphilis to be one of those typical infectious diseases which are able to confer active immunity without necessarily inducing the disease. A woman may react to the infection of syphilis solely with active immunity, while her unborn child reacts with clinical manifestations.

Deutsche Med. Wochenschrift, Berlin and Leipsic.

119 (XXIX, 13, March 26.) Fall von allgemeiner (generalized) Miliartuberkulose nach (after) Abort. M. Westenhoeffer.
120 *Elimination of Volatile Fatty Acids Through the Urine. F. Rosenfeld.—Die Ausscheidung der flüchtigen Fettsäure durch den Harn.
121 Die suprapubische Cystostomie nach Witzel und ihre jetzige vereinfachte (and its present simplified) Technik. F. Wenzel.
122 *Die pulsatorische Erschütterung (jerking movement) des Kopfes (of head). Das sogen. Musset'sche Symptom. B. Herzog.
123 Der Aderlass (venesection) bei Urämie. M. Jaerisch.

120. **Differential Value of Volatile Fatty Acids in Urine.**—This communication from von Leyden's clinic announces that the proportion of volatile fatty acids in the urine was always very low in the cases of pneumonia examined—20 and 30—but rose after the crisis to 100 and 240. In some cases the proportion rose during the first stages of the disease, and the diagnosis of some suppuration as responsible for the increased lipaciduria, was confirmed by the course of events. The volatile fatty acids are produced by bacterial action, principally on albumin, wherever there is putrefaction, thus in suppurations and hemorrhages as well as in the intestines. It was also noted that the fatty acids were abundant in cases of gastric ulcer and gastrectasia with normal or excessive acidity. In case of stagnation of the stomach contents, the consequence of old cicatricial stenosis of the pylorus, accompanied by sub- or anacidity, the amount of fatty acids was very small. But when the same conditions prevailed as consequence of a carcinomatous growth, the proportion of volatile fatty acids was high, and even extremely high in some cases. Their abundance, therefore, may serve to differentiate carcinoma of the stomach. Rosenfeld suggests that the excess of fatty acids in the latter case may be due to the impaired oxidizing power of the organism in case of malignant disease. It occurred in his experience even when no pus nor blood could be detected in the stomach contents.

122. **Rhythmic Jerking of the Head.**—The motion of the head synchronous with the pulse beat which has been accepted as a sign of aneurism of the aorta, has been observed by Herzog in other conditions. He has noted it in patients with atheroma, in alcoholics, occasionally in interstitial nephritis, and in cases of hypertrophy of the left ventricle. He thinks that it can be explained by some local increase in the blood pressure either from atheroma or stagnation of blood in the region. The phenomenon is more marked during expiration and becomes less distinct during inspiration. It was observed in 2 cases in which the findings were negative at first, with no evidence of exaggerated blood pressure in the radial pulse, but this head phenomenon attracted attention to the heart, and was thus the means of revealing the existence of cerebral syphilis, its recognition followed by complete cure under appropriate treatment. He has also observed the phenomenon in certain cases of neurasthenia in which it was probably due to the lack of tonicity of the muscles of the neck.

British Medical Journal, London.

April 4.

124 *The Prognosis and Treatment of Syphilitic Disease of the Nervous System. William R. Gowers.
125 Case of Acute Acromegaly. W. Mitchell Stevens.
126 Case of Chronic Acromegaly. C. H. Cattle.
127 The Meaning of the Term "Neurasthenia" and the Etiology of the Disease. P. C. Smith.
128 *The Knock-Out Blow on the Point of the Jaw. James G. Duncanson.
129 Theories of Immunity and Their Clinical Application. A. S. Grunbaum.
130 Bacteriolytic Power of the Blood, and on Its Relation to the Problems of Antityphoid Inoculation and the Recent Work of Dr. MacFadyen. A. E. Wright.

124. **Syphilis of the Nervous System.**—Gowers declares that, properly speaking, there is no syphilis of the nervous system; it is the neuroglia and "adventitial" elements that are directly affected and the nervous lesions are secondary, as the results of pressure and the disturbance of nutrition, etc. The characteristic specific process is a neoplasm, and with its rapid growth it produces proportionate vascular disturbances; thus we have two forms, the neoplastic and the inflammatory, in all specific processes. Local inflammation may involve the nerve elements as well. The effects of inflammation are more or less constant. No structure is exactly the same afterward as before. Slight residual alterations in the brain, for example, may cause grave disturbance of function. The essential point to be considered in syphilitic disease is that the specific process can be influenced by treatment, but this may produce no effect on the simple changes on which the symptoms directly depend. The forecast is favorable in proportion as the latter can pass away when their causes cease to act. The quicker the specific process is overcome the less liable is the secondary process to be permanent and serious. A long duration of these conditions before proper treatment is instituted is the real secret of their formidable character. Patients suffer long before they seek advice; the disease is sometimes unsuspected. The effects of mercury and iodid are discussed and, while iodin seems, from experiments, to have the most rapid effect, Gowers says we would expect to see mercury have the most influence; experience seems to confirm this to some extent. He does not think it wise to give iodid and mercury together in full doses except for a very short time in urgent cases. In administering mercury the object is to get enough into the system, and this can only be done slowly, and he believes inunctions one of the best methods of doing this. He would not continue any treatment long. His opinion is that specific treatment should be energetic, but not continuous. He would stop it in eight weeks or so and re-administer it again in from four to six months. The patient should have three or four weeks' treatment with iodid every four months during the first year in true syphilitic symptoms, and then every six months during the next three or four years. The treatment may lose its power if continuously administered. We should remember also that toxic degenerations due to syphilis, such as those in developing locomotor ataxia and paresis, may develop sometimes before the true constitutional disease is at an end, and he calls attention to some perplexing cases of mixed syphilitic and parasyphilitic disease.

128. **Knock-Out Blow on the Point of the Jaw.**—The mechanism of this formidable blow, which temporarily completely disables the recipient, is studied by Duncanson, and he accounts for it by the exaggeration of rotation setting up a disturbance in the endolymph of the semicircular canals and the ampullæ so intense that the nerve endings are stunned by the force of the sudden impact on the endolymph, thus equilibrium and consciousness are totally lost. There is something in it more definite than concussion and shock.

The Lancet, London.

April 4.

131 *The Existence of Organic Disease in the Absence of Obvious Symptoms. J. R. Bradford.
132 *Theories of Immunity and Their Clinical Application. A. S. F. Grunbaum.
133 *Further Observations on the Treatment of Smallpox by the Serum of Immunized Heifers. R. S. Thomson and John Brownlee.
134 *Ethyl Chlorid as a General Anesthetic. W. J. McCardie.
135 Operations for Rectifying Crooked and Depressed Noses. W. J. Walsham.
136 On the Use of Iodipin in Cases of Uterine Fibroid. John A. Shaw-Mackenzie.

131. **Latent Diseases.**—The subject of these diseases without obvious symptoms is noted by Bradford, who reviews the principal conditions in which this absence of symptoms may occur. In some instances the onset of acute symptoms indicates an exacerbation of the chronic morbid state and is due to a sudden increase of lesion. More often, however, it is dependent merely on progressive development of the underlying malady or it may be due to complications. The instances of latent diseases which he gives are numerous, including renal sequelæ in diseases of the bladder and pelvic organs, latent cerebral abscess as a complication of ear disease, pericarditis in renal disorders, walking typhoid, pleural effusion, which is often recognized as latent and generally supposed to be associated with pulmonary tuberculosis, latent phthisis, which may exist to a certain extent, peritonitis, which may be present in its most severe and violent forms without any characteristic symptoms, and especially gastric ulcer and malignant disease of the viscera. Many hepatic disorders run a latent course. This is not uncommon in the tropics. Gallstones produce no symptom in the great majority of cases and a patient may suffer from hepatic cirrhosis with no apparent ill effect for a prolonged period. Sometimes the patient appears to suffer from a general peritonitis dependent on perforation, but none such is found, but rather a high degree of atrophic cirrhosis. Brain tumors, nephritis and aneurism of the large cerebral vessels may also exist for a considerable time, and many diseases of the spinal cord and meninges and even the spinal column may fail to be recognized by the patient or the practitioner. Fracture of the spine as a result of sudden movement may be the first unequivocal evidence of the existence of sarcoma or other malignant disease of the bone. Kidney diseases, however, furnish the most striking and frequent examples, not only in such disorders as hydronephrosis and pyelonephritis, but also in cystic disease, and especially in granular kidney and certain forms of Bright's disease. Uremia often, in its most acute form, may be the first intimation of the existence of cystic disease of the kidneys. The great point to be borne in mind is that most of these latent disorders can be detected or, at any rate, suspected by the use of thorough physical examination. It is the symptoms, not the physical signs, that are lacking.

132. **Immunity.**—Grunbaum's third lecture treats of the actions or sera, other than antitoxic and bactericidal, incubation, protective inoculation, relapses and reinfections, predisposition, susceptibility, serum diagnosis, agglutinins, etc., all in accordance with Ehrlich's theory, which he described in his earlier lectures.

133. **Smallpox.**—Thirteen cases of smallpox were experimentally treated with large doses of serum of immunized heifers by Thomson and Brownlee. Three of these were hemorrhagic cases and all died; two of these too early for the treatment to have had any effect Of the confluent cases, of which there were 4, 2 died; the discrete cases all recovered. The general results of the experiments were rather negative, but the authors believe that further trial is advisable. No action of any kind was observed in the hemorrhagic cases. In two cases where the serum was administered eight to eighteen days before death, no influence seemed to be exercised, although there was ample time for the serum to act. In 6 cases, where the serum was administered from four to seven days before desiccation, the course was modified, but, as 3 of these cases were vaccinated, and in a fourth the vaccination was assumed but doubtful, it is impossible to say that the treatment acted independently of anything else. In one case the serum completely failed to modify the course of a revaccination.

134. **Ethyl Chlorid.**—Having given ethyl chlorid 450 times, McCardie has never had any trouble ascribable to the drug itself. He now gives it with confidence and finds its general action on the circulation and respiration appears to be stimulative. He has not tried it in major operations, because he sees no advantage in it in such cases over ether or chloroform. It is only for short operations that it is specially beneficial. It is safer, he thinks, than ethyl bromid, as the bromid compounds have a more lasting and toxic effect than the chlorid compounds.

Indian Medical Gazette, Calcutta.

March.

137 Report on the Outbreak of Epidemic Dropsy in the Barisal Jail. R. Cobb.
138 *The Mode of Entry of Plague Infection into the Human Body. H. E. Deane.
139 An Analysis of One Thousand Consecutive Cataract Extractions. (Continued.) F. P. Maynard.
140 Notes on the Origin of the Presidency General Hospital, Calcutta. (Concluded.) D. M. Moir.

138. **Plague.**—Deane discusses at length how plague infection enters the human body, and combats the notion that it is exclusively through abrasions. He gives a considerable amount of evidence, and concludes that careful examination shows that a very small proportion of the natives display cuts or abrasions, no more than can be found in any large community. When abrasions are found on persons with plague there is an absence of any sign that would render it probable that they were the point of inoculation In a proportionately small proportion of cases skin lesions are observed, which, when appearing early in the course of the disease, seem to point to an entry for the virus, but the evidence is unsatisfactory and the lesions can be more satisfactorily accounted for by supposing them to be manifestations of the general blood infection. Plague, he holds, is contracted by inhalation of the virus. The different symptoms presented in different individuals depend on the individual constitutions, and they may be in part due to the quality and quantity of the virus observed. Infection through the respiratory organs is borne out by the course taken by the disease and its virulence in damp, dark places void of ventilation.

Journal of Tropical Medicine, London.

April 1.

141 *Tropical Hygiene. (To be continued.) W. J. Simpson.

141. **Tropical Hygiene.**—Simpson notices the different conditions in the tropics from those of the temperate and cooler climates, and remarks that one has to adapt himself to the circumstances. For instance, water-sealed closet traps that are considered advisable in cooler climates would be unadvisable in warmer countries, because they are sure to be unsealed by evaporation in summer and pressure through storms in the rainy season. He divides the tropics into the tropical and subtropical regions, including in the latter the region extending to 35 degrees latitude north and south and external to the tropics of Cancer and Capricorn. The irregularity of isotherms is remarked on and also the difference between insular and continental climates. Humidity has a powerful effect, and the distribution of the rains has much to do with the formation of the climate. Rain within the tropical zone is much more decided than in the temperate zone There are no drizzling rains, but the showers, whether short or long, are heavy. This favors, excepting in very porous soils, floods, inundations, and the formation of swamps, which require special attention to drainage for their prevention. The climate impresses itself strongly on the vegetation of the locality; where there is a great variety of plant life, luxuriant growth, the climate is sure to be hot and moist. When the vegetation is less luxuriant, but of the same tropical nature, the climate will be hot, but with plenty of rain, but where the heat is strong and the rain fails, vegetation fails also. Putrefaction and fermentation proceed with much more rapidity in warm climates, especially in hot and humid ones. What is harmful in Europe is doubly so in the tropical regions. As soon as the European enters the tropics he comes under the influence of a new environment, though the illnesses to which he is subject are not, as formerly considered, altogether the fault of the climate but are due largely to unsanitary habits, overfeeding,

intemperance, unsuitable clothing, etc When the food is good, the habitations healthy and the habits what they should be, the death rate is comparatively low. It is difficult to judge the proportion of ill health due to preventable causes, but, putting the individual under favorable hygiene, the mortality which used to be ascribed to the climate can be reduced 10 to 15 times its former rate in the West Indies, and at least five times its former rate in India. The question arises whether, apart from inattention to personal hygiene, insanitary conditions and malaria, residence in the tropics is more unhealthy to Europeans than residence in their own country. It is certain that in the vast majority of cases residence in the tropics for a short time does no harm.

New Patents.

Patents of interest to physicians, March 17 and 24:

722943. Hypodermic syringe case. Thomas A. Chappell, Brownwood, Ga.
722819. Syringe. Wm. M. Decker, Buffalo, N. Y.
722953. Rectal nozzle for syringes. Wm. M. Decker, Buffalo, N. Y.
722954. Vaginal nozzle for syringes. Wm. M. Decker, Buffalo, N. Y.
722976. Bath and fever machine. Frank W. Hall, Ingleside, Ga.
722841. Electrical massage apparatus. Wilbur F. Hedstrom, Los Angeles, Cal.
723042. Valve for syringes, atomizers, etc. Silas Schwerin, Belleville, N. J.
723070. Inhaler. Clarence W. Taylor, Sioux City, Iowa.
723355. Thermometer case. Albert Ashenberger, Elkins, W. Va.
723588. Hypodermic syringe. Fairleigh S. Dickinson, Bayonne, N. J.
723456. Apparatus for treating the eye. Henry F. Garey, Baltimore.
723268. Inhaler. Karl Greimer. Plauen, Germany.
723291. Strength testing device. John Maitland, Swampscott, Mass.
723735. Massage appliance. Torsten Schillberg, Glasgow, Scotland.
723738. Inhaler. August K. Schulte, Philadelphia, Pa.
723790. Endoscope or other optical instrument. Reinhold H. Wappler, New York City.
723797. Electric thermal therapeutic blanket. Wm. E. Williams, Springfield, Ohio.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

THE PRACTICAL MEDICINE SERIES OF YEAR-BOOKS, Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Issued Monthly. Under the General Editorial Charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume IV. Gynecology. Edited by Emilius C. Dudley, A.M., M.D., Professor of Gynecology, Northwestern University Medical School, and William Healy, A.B., M.D., Instructor in Gynecology, Northwestern University Medical School. March, 1903. Cloth. Pp. 242. Price, $1.25. Chicago: The Year-Book Publishers.

DISEASES OF THE PANCREAS, DISEASES OF THE SUPRARENAL CAPSULES, AND DISEASES OF THE LIVER. By Dr. L. Oser, of Vienna; Dr. E. Neusser of Vienna; and Drs. H. Quincke and G. Hoppe-Seyler of Kiel. Edited, with Additions, by Frederick A. Packard, M.D., Late Physician to the Pennsylvania and to the Children's Hospitals, Philadelphia; and Reginald H. Fitz, M.D., Hersey Professor of the Theory and Practice of Physic, Harvard University Medical School, Boston. Illustrated. Cloth. Pp. 918. Price, $5.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

THE CARE AND FEEDING OF CHILDREN. A Catechism for the Use of Mothers and Children's Nurses. By L. Emmett Holt, M.D., LL.D., Professor of Diseases of Children in the College of Physicians and Surgeons (Columbia University). Third Edition, Revised and Enlarged. Cloth. Pp. 149. Price, $0.75. New York and London: D. Appleton & Co. 1903.

HEARING ON THE BILL (H. R. 14788) TO ESTABLISH A LABORATORY FOR THE STUDY OF THE CRIMINAL, PAUPER AND DEFECTIVE CLASSES, with a Bibliography. By Arthur MacDonald, Specialist in the United States Bureau of Education. Had before the Committee on the Judiciary. Paper. Pp. 309. Washington: Government Printing Office. 1902.

DISEASES OF THE STOMACH. By Dr. F. Riegel of Giessen. Edited, with Additions, by Charles G. Stockton, M.D., Professor of Medicine in the University of Buffalo. Illustrated, Including 6 Full-page Plates. Cloth. Pp. 835. Price, $5.00 net. Philadelphia, New York, London: W. B. Saunders & Co., 1903.

THE SURGERY OF THE HEAD. By Bayard Holmes, B.S., M.D., Professor of Surgery in the University of Illinois. Cloth. Pp. 569. Price, $2.50. New York: D. Appleton & Co. 1903.

SIXTEENTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF THE STATE OF OHIO For the Year Ending Oct. 31, 1901. Paper. Pp. 455. Columbus, Ohio: Fred J. Heer. 1902.

DIE PFLANZENPARASITARE URSACHE DES KREBSES UND DIE KREBSPROPHYLAXE. Von Medizinalrat Dr. Robert Behla. Mut 4 Tafeln. Paper. Pp. 48. Berlin: Verlag von Richard Schoetz. 1903.

FIFTH ANNUAL REPORT OF STATE HOSPITAL FOR CRIPPLED AND DEFORMED CHILDREN. In Charge of Board of Regents, University of Minnesota. Paper. Pp. 16.

The Public Service.

Army Changes.

Movements of Officers of the Medical Department, U. S. Army, under orders from the Adjutant-General's Office, Washington, D. C., from March 27 to April 4, 1903:

Ashford, Bailey K., captain and asst.-surgeon, U. S. A., is relieved from further temporary duty at San Juan, P. R., and will proceed to Cayey, P. R., for duty.

Beal, Howard W., first lieut. and asst.-surgeon. The resignation of the above has been accepted, to take effect May 31, 1903.

Bacon, Alexander P., contract dental surgeon, will proceed to Vancouver barracks and report to the commanding general, Department of the Columbia, for assignment to temporary duty with the Seventeenth Infantry, and, on the completion thereof, will return to his proper station in the Department of Dakota.

Baker, David, first lieut. and asst.-surgeon, is granted leave of absence for four months from about May 1.

Chamberlain, Weston P., asst.-surgeon, will proceed to Cabana barracks, Havana, Cuba, for duty, to relieve First Lieut. John R. Devereaux.

Collins, George L., first lieut. and asst.-surgeon, will report at Fort Adams for duty on completion of course of instruction at the Army Medical School.

Devereaux, John R., asst.-surgeon, on being relieved from duty at Cabana barracks, Havana, Cuba, will proceed to Fort Columbus for duty, to relieve First Lieut. Eugene H. Hartnett, asst.-surgeon.

Devereux, Thomas, asst.-surgeon, is relieved from attendance at the Army Medical School, to take effect April 7, and will then proceed to San Francisco, Cal., for assignment to duty as surgeon on the transport *Sumner*.

De Loffre, Samuel M., first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School will proceed to Fort Assinniboine for duty.

Edio, Guy L., surgeon, is relieved from duty at Columbus barracks, to take effect on the arrival of Lieut. Truby at that post, and will then proceed to Monterey, Cal., for duty.

Ford, Clyde S., first lieut. and asst.-surgeon, is relieved from duty at Fort Wadsworth, and will proceed to Fort H. G. Wright for duty, to relieve First Lieut. Howard W. Beal, asst.-surgeon.

Frick, Euclid B., major and surgeon, will proceed to Fort Snelling for duty, to relieve Major Edgar A. Mearns, surgeon.

Gilchrist, Harry L., first lieut. and asst-surgeon, will, on the completion of the course of instruction at the Army Medical School, proceed to Fort Screven and report for duty.

Gosman, George H. R., first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will proceed to Fort Du Chesne for duty.

Gregory, Junius C., first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will report at the U. S. General Hospital, Washington barracks, for temporary duty.

Gapen, Nelson, first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will proceed to San Antonio, Texas, for assignment to duty to accompany the First Squadron, Twelfth Cavalry, to the Philippine Islands. On his arrival at Manila, Lieut. Gapen will report for assignment to duty.

Hartnett, Eugene H., first lieut. and asst.-surgeon, will proceed to Vancouver barracks, for duty in Alaska.

Hansell, Haywood S., first lieut. and asst.-surgeon, on the completion of the course of study at the Army Medical School, will proceed to Fort Monroe for duty.

Harris, Jesse R., first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will proceed to Fort Myer for duty.

Hathaway, Levy M., asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will proceed to Vancouver barracks for assignment to duty in Alaska.

Kirby-Smith, Reynold M., first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will proceed to Fort Barrancas for duty.

Lippitt, William F., major-surgeon, will proceed to San Juan, P. R., for duty, to relieve Major Euclid B. Frick, surgeon.

Mearns, Edgar A., major-surgeon, will proceed to San Francisco, Cal., for transportation to the Philippine Islands, where he will report for assignment to duty.

Lambert, Samuel E., first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will proceed to St. Paul, Minn., for assignment to temporary duty at Fort Keogh, and to accompany the Second Squadron, Thirteenth Cavalry, to the Philippine Islands. On arrival at Manila, Lieut. Lambert will report for assignment to duty.

Newgarden, George J., asst.-surgeon, having completed the duty for which he was ordered to Washington, D. C., will proceed, not later than April 11, to Fort Mason, and turn over the public property for which he is responsible and, on the completion of this duty, will join his proper station at Fort Harrison.

Stockard, James K., contract surgeon, is relieved from duty at Fort Delaware, to take effect on the return to duty at that post of Contract Surgeon William J. Enders, and will then proceed to Fort Du Pont for duty, to relieve First Lieut. Samuel L. Steer.

Steer, Samuel L., first lieut. and asst.-surgeon, will proceed to Hot Springs, Ark., and report at the Army and Navy General Hospital for duty.

Smart, William M., first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will proceed to Fort Leavenworth for duty.

Stewart, William J. S., contract surgeon, on his relief from duty as surgeon on the transport *Logan*, will report for assignment to duty as surgeon on the transport *Dix*, to relieve Contract Surgeon H. Newton Kierulff.

Turnbull, Wilfred, first lieut. and asst.-surgeon, is relieved from duty at Fort Myer, and will proceed to Fort Monroe for duty, to relieve Major William F. Lippitt.

Truby, Willard F., first lieut. and asst.-surgeon, on his arrival in New York City, will proceed to Columbus barracks for temporary duty.

Talbott, Edward M., first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will proceed to Fort Clark for temporary duty, and to accompany the Second Squadron of the Twelfth Cavalry to the Philippine Islands. On his arrival at Manila, Lieut. Talbott will report for assignment to duty.

Scott, George H., first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will proceed to San Antonio, Texas, for assignment to temporary duty at Fort Clark, and to accompany the Third Squadron, Twelfth Cavalry, to the Philippine Islands. On his arrival at Manila, Lieut. Scott will report for assignment to duty.

Pierson, Robert H., first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will report at the U. S. General Hospital, Fort Bayard, for duty, to relieve First Lieut. Horace D. Bloombergh, asst.-surgeon.

Pyles, Will L., first lieut. and asst.-surgeon, on the completion of the course of instruction at the Army Medical School, will report at Washington barracks for temporary duty and to accompany the engineer troops to the Philippine Islands. On his arrival at Manila, Lieut. Pyles will report for assignment to duty.

Williams, Allie W., first lieut. and asst.-surgeon, is relieved from duty at Cayey, P. R., and will proceed to Fort Greble for duty, to relieve First Lieut. Weston P. Chamberlain, asst.-surgeon.

Winter, Francis A., captain and asst.-surgeon, will report on April 1 to Major A. La Garde, surgeon, president of the examining board, at the Army Medical Museum Building, Washington, D. C., for examination for promotion.

The following named assistant-surgeons will, on the completion of the course of instruction at the Army Medical School, proceed to San Francisco, Cal., for assignment to duty as surgeons on the transports designated after their respective names, to relieve the contract surgeons now on duty on those transports: First Lieuts. John W. Hamser, *Sheridan;* William T. Davis, *Logan;* Robert L. Carswell, *Kilpatrick;* Cary A. Snoddy, *Sherman;* William A. Powell, *Thomas.*

The following named assistant-surgeons will, on the completion of the course of instruction at the Army Medical School, proceed to the posts designated after their respective names for duty: First Lieuts. Robert M. Blanchard, Fort Thomas; James Bourke, Fort Sheridan.

The following named asst.-surgeons will, on the completion of the course of instruction at the Army Medical School, proceed to Plattsburg barracks for temporary duty and to accompany the Twenty-Third Infantry to the Philippine Islands: First Lieuts. John A. Clark, Jacob M. Coffin and James D. Fife. On arrival at Manila Lieuts. Clark, Coffin and Fife will report to the commanding general, Division of the Philippines, for assignment to duty.

The following named assistant-surgeons, on the completion of the course of instruction at the Army Medical School, will proceed to San Antonio, Texas, and report for assignment to duty to accompany the Fourth Infantry to the Philippines, where they will report for assignment to duty: First Lieuts. William H. Moncrief, Charles F. Morse and Clarence H. Conner.

The following named assistant-surgeons, on the completion of the course of instruction at the Army Medical School, will proceed to Vancouver barracks, and report for assignment to duty to accompany the Seventeenth Infantry to the Philippine Islands, where they will report for assignment for duty: First Lieuts. Louis C. Duncan, Philip W. Huntingdon and Noel I. Barron.

The following named assistant-surgeons, on the completion of the course of instruction at the Army Medical School, will proceed to Denver, Colo., for assignment to duty to accompany the Fourteenth Cavalry to the Philippine Islands, where they will report for assignment to duty: First Lieuts. Samuel J. Morris and Harry S. Purnell.

The following named assistant-surgeons, on the completion of the course of instruction at the Army Medical School, will proceed to San Francisco, Cal., and report for transportation to the Philippine Islands, where they will report for assignment to duty: First Lieuts. Leon T. Le Wald, Alexander Murray, Edwin D. Kilbourne and Jay W. Grissinger.

The following named contract surgeons, on their relief from their present duties, will report to the commanding general, Department of California, for assignment to duty, or for orders to proceed to their respective homes for annulment of contract, if their services are not required: H. Newton Kieruff, John P. Kelly, Stephen Wythe, Homer C. Moses and Joseph J. Shafer.

The following named officers will report to Major Louis A. La Garde, surgeon, president of the examining board, at the Army Medical Museum Building, District of Columbia, for examination for promotion: First Lieuts. Weston P. Chamberlain, Edward R. Schreiner, Ira A. Shiner, Douglas F. Duval, Clarence J. Manly, David Baker, Albert E. Truby, Eugene H. Hartnett, Clyde S. Ford, asst.-surgeons.

Roberts, William, first lieut. and asst.-surgeon, is ordered to proceed to Hot Springs, Ark., and report at the Army and Navy General Hospital at that place, for treatment.

Robins, Robert P., contract surgeon, now casually at Fort Porter, from detached service, is assigned to temporary duty at that post until further orders.

Truby, Willard F., first lieut. and asst.-surgeon, is directed to proceed to Fort Ethan Allen for temporary duty, instead of to Columbus barracks, as directed in order of March 27.

Watson, Harry J., contract surgeon, is relieved from duty at the Presidio and assigned to duty as transport surgeon of the Army transport *Sumner.*

Winter, Francis A., captain and asst.-surgeon, in addition to his present duties, will report by letter to Major-General John C. Bates, commanding the Department of the Missouri, for such duty as may be assigned to him in connection with the assembling of troops at St. Louis, Mo.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ended April 11:

Surgeon C. Biddle, detached from the Navy Yard, League Island, Pa., and ordered to the *Minneapolis.*

Surgeon G. T. Smith, detached from the *Puritan* and ordered home to await orders.

Surgeon O. D. Norton, detached from the *Minneapolis* and ordered to the Navy Yard, League Island.

Asst.-Surgeon J. H. Halloway, detached from the Museum of Hygiene and ordered to the *Franklin.*

Asst.-Surgeon E. M. Brown, detached from the Museum of Hygiene and ordered to the Naval Hospital, Norfolk, Va.

Acting Asst.-Surgeon D. P. McCord, appointment revoked, to take effect April 4.

Surgeon E. S. Bogert, ordered to the Naval Academy, Annapolis.

Asst.-Surgeon T. M. Lippitt, retired, detached from the Naval Hospital, New York, and ordered home.

Asst.-Surgeon C. F. Ely, ordered to the Naval Hospital, New York.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended April 9, 1903:

Surgeon R. D. Murray, granted leave of absence for fourteen days from May 1.

Surgeon W. P. McIntosh, to proceed to Lumpkin, Ga., for special temporary duty.

Asst.-Surgeon C. C. Pierce, detailed to represent the service at the meeting of the Florida State Medical Association, to be held at St. Augustine, Fla., April 8 to 10.

Acting Asst.-Surgeon G. H. Altree, granted leave of absence for five days from April 8.

Acting Asst.-Surgeon J. C. Rodman, granted five days' leave of absence from April 8.

Acting Asst.-Surgeon W. S. Walkley, granted leave of absence for two days.

PROMOTION.

E. M. Holt, pharmacist of the third class, promoted to be pharmacist of the second class, effective March 2, 1903.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended April 11, 1903:

SMALLPOX—UNITED STATES.

Alabama: Mobile, March 28-April 4, 2 cases.

California: Fresno, March 1-31, 20 cases, 1 death; Los Angeles, March 21-28, 2 cases; Sacramento, March 21-28, 1 case; San Francisco, March 26-April 2, 5 cases; Stockton, March 1-31, 4 cases.

Colorado: Denver, March 14-28, 49 cases.

Florida: Jacksonville, March 28-April 4, 4 cases.

Illinois: Alton, March 28-April 4, 1 case; Belleville, March 28-April 4, 1 case; Galesburg, March 28-April 4, 2 cases; Kankakee, March 24-31, 1 case.

Indiana: Elwood, March 22-29, 13 cases; Indianapolis, March 28-April 4, 10 cases, 1 death; Kokomo, March 28-April 4, 1 case.

Iowa: Dubuque, March 28-April 4, 1 case.

Kansas: Wichita, March 28-April 4, 2 cases.

Kentucky: Lexington, March 28-April 4, 2 cases.

Louisiana: New Orleans, March 28-April 4, 3 cases, all imported.

Maryland: Baltimore, March 28-April 4, 1 case.

Massachusetts: Boston, March 28-April 4, 2 cases, 1 death; Holyoke, March 21-April 4, 2 cases.

Michigan: Ann Arbor, March 21-28, 1 case; Detroit, March 28-April 4, 15 cases; Grand Rapids, March 28-April 4, 10 cases; Port Huron, March 28-April 4, 2 cases.

Missouri: St. Joseph, March 28-April 4, 1 case; St. Louis, March 29-April 5, 7 cases.

Nebraska: Omaha, March 28-April 4, 7 cases.

New Hampshire: March 28-April 4, Manchester, 3 cases; Nashua, 2 cases.

New Jersey: Hudson County, March 29-April 5, 2 cases.

New York: Buffalo, March 31-April 6, 1 death; New York, March 28-April 4, 1 case.

Ohio: Cincinnati, March 27-April 3, 9 cases; Toledo, March 21-April 4, 6 cases.

Oregon: Portland, April 1, 1 case.

Pennsylvania: March 28-April 4, Erie, 3 cases, 1 death; Johnstown, 1 case; Norristown, 1 case; Pittsburg, 25 cases, 4 deaths.

South Carolina: Charleston, March 28-April 4, 7 cases.

SMALLPOX—INSULAR.

Philippines: Manila, Feb. 13-20, 1 case.

SMALLPOX—FOREIGN.

Brazil: Pernambuco, Feb. 1-28, 9 deaths; Rio de Janeiro, Feb. 27-March 6, 8 deaths.

Colombia: Barranquilla, March 8-15, 2 deaths.

Great Britain: Birmingham, March 14-21, 12 cases, 3 deaths; Bradford, March 1-14, 6 cases; Liverpool, to March 21, 86 cases, 6 deaths; London, March 14-21, 2 cases; Manchester, March 14-21, 8 cases; Nottingham, March 14-21, 3 cases; Walker-on-Tyne, March 7-14, 1 case; Wallsend-on-Tyne, March 7-14, 1 case.

Italy: Palermo, March 7-14, 1 case.

Mexico: City of Mexico, March 15-22, 6 cases, 5 deaths.

Russia: March 7-14, Moscow, 3 cases, 1 death; St. Petersburg, 37 cases, 5 deaths; Warsaw, 4 deaths.

Straits Settlements: Singapore, March 7-14, 4 deaths.

YELLOW FEVER.

Brazil: Rio de Janeiro, Feb. 27-March 6, 27 deaths.

Colombia: Cartagena, March 9-16, 1 death; Panama, March 19-26, 4 cases, 1 death.

Ecuador: Guayaquil, March 7-14, 17 deaths.

Mexico: Vera Cruz, March 21-28, 2 cases.

CHOLERA—INSULAR.

Philippine Islands: Provinces, Feb. 7-14, 570 cases, 270 deaths.

PLAGUE—INSULAR.

Philippine Islands: Manila, Feb. 13-20, 2 deaths.

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